

GLEASON'S

NEW STANDARD MAP OF THE WORLD

ON THE PROJECTION OF
MODERN COLLEGE,
SCIENTIFICALLY AND

A S
"IT IS"

J. S. CHRISTOPHER,
BLACKHEATH, ENGLAND.
PRACTICALLY CORRECT.

PATENT ALL
Nov

TUDE
D
TIME
ULATOR

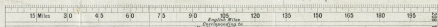
Applications made
ENG
CAN
FRAN
DENT

THE ZETETIC COLLECTION

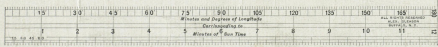


JUNE SOLSTICE.

and December, the white represents the
his respective months, at Noon. This
the Arctic Circle for 24 hours. From
moves round the Tropic in a spiral circle,
until it reaches its destiny on the southern
December 22nd.



The upper portion of this scale shows the relation that English or Land miles bear to Nautical or Sea miles, sometimes called Geographical.
The lower half shows minutes and degrees of the arc, as compared to Sea time. By laying a straight-edge across the scale,
it shows the relations of all the divisions.



PUBLISHED BY THE BUFFALO ELECTROTYPE AND ENGRAVING CO., BUFFALO, N. Y., U. S. A.

ALL RIGHTS RESERVED.

Map 77.3
Map 10.4.1892

DECEMBER SOL

On December 22nd, the Sun moves to
the Tropic, and during the day lights up
the North from the Arctic Circle to the
Equator. There is no "sunlight" beyond
regions of ice. On the 22nd of Decem-
ber the sun's journey again, returning
his northward journey again, returning
and thus completes his season.

August 22nd
1892

GLEASON'S

NEW STANDARD MAP OF THE WORLD

ON THE PROJECTION OF
MODERN COLLEGE,
SCIENTIFICALLY AND

A S
"IT IS"

J. S. CHRISTOPHER,
BLACKHEATH, ENGLAND.
PRACTICALLY CORRECT.

PATENT ALL
Nov

TUDE
D
TIME
ULATOR

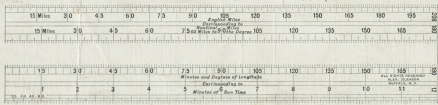
Applications made
ENGL
FRAN
GERM
DEN

THE ZETETIC COLLECTION



UNE SOLSTICE.
and December, the white represents the
his respective months, at Noon. This
the Arctic Circle for 24 hours. From
moves round the Tropic in a spiral circle,
until it reaches its destiny on the southern
December 22nd.

DECEMBER SOL
9th December 22nd, the Sun moves to
corn, and during the day lights up
the Earth from the Arctic Circle to the
ice. There is no "sunlight" beyond
regions of ice. On the 22nd of Decem
his southward journey again, returning
and thus completes his season.



PUBLISHED BY THE BUFFALO ELECTROTYPE AND ENGRAVING CO., BUFFALO, N. Y., U. S. A.

ALL RIGHTS RESERVED.

Map 77.3
Map 10.4.1892

[Entered at Stationer's Hall.]

ZETETIC ASTRONOMY.
EARTH NOT A GLOBE!
AN EXPERIMENTAL INQUIRY
INTO THE
TRUE FIGURE OF THE EARTH:
PROVING IT A PLANE,
WITHOUT AXIAL OR ORBITAL MOTION;
AND THE
ONLY MATERIAL WORLD
IN
THE UNIVERSE!

BY "PARALLAX."

London:

SIMPKIN, MARSHALL, AND CO., STATIONERS' HALL COURT.

Bath:

S HAYWARD, GREEN STREET.

1865.

[The Right of Translation is Reserved by the Author.]

1874. A. 3

BATH :
PRINTED BY S. HAYWARD, GREEN STREET.



GENERAL CONTENTS.

SECTION I.

Introduction—Experiments proving the Earth to be a Plane.

SECTION II.

The Earth no Axial or Orbital Motion.

SECTION III.

The true distance of the Sun and Stars.

SECTION IV.

The Sun moves in a Circle over the Earth, concentric with the North Pole.

SECTION V.

Diameter of Sun's path constantly changing.

SECTION VI.

Cause of Day and Night, Seasons, &c.

SECTION VII.

Cause of "Sun rise" and "Sun set."

SECTION VIII.

Cause of Sun appearing larger when "Arising" and "Setting" than when on the Meridian.

IV.

SECTION IX.

Cause of Solar and Lunar Eclipses.

SECTION X.

Cause of Tides.

SECTION XI.

**Constitution, Condition, and ultimate Destruction of the Earth
by Fire.**

SECTION XII.

**Miscellanea—Moon's Phases—Moon's appearance—Planet
Neptune—Pendulum Experiments as Proofs of Earth's motion.**

SECTION XIII.

Perspective on the Sea.

SECTION XIV.

General Summary—Application—"CUI BONO."

ZETETIC ASTRONOMY.

THE term “zetetic” is derived from the Greek verb *zeteo*; which means to search or examine—to proceed only by inquiry. None can doubt that by making special experiments and collecting manifest and undeniable facts, arranging them in logical order, and observing what is naturally and fairly deducible, the result will be far more consistent and satisfactory than by framing a theory or system and assuming the existence of causes for which there is no direct evidence, and which can only be admitted “for the sake of argument.” All theories are of this character—“supposing instead of inquiring, imagining systems instead of learning from observation and experience the true constitution of things. Speculative men, by the force of genius may invent systems that will perhaps be greatly admired for a time; these, however, are phantoms which the force of truth will sooner or later dispel; and while we are pleased with the deceit, true philosophy, with all the arts and improvements that depend upon it, suffers. The real state of things escapes our observation; or, if it presents itself to us, we are apt either to reject it

wholly as fiction, or, by new efforts of a vain ingenuity to interweave it with our own conceits, and labour to make it tally with our favourite schemes. Thus, by blending together parts so ill-suited, the whole comes forth an absurd composition of truth and error. * * These have not done near so much harm as that pride and ambition which has led philosophers to think it beneath them to offer anything less to the world than a complete and finished system of nature ; and, in order to obtain this at once, to take the liberty of inventing certain principles and hypotheses, from which they pretend to explain all her mysteries.”*

Copernicus admitted, “ It is not necessary that hypotheses should be true, or even probable ; it is sufficient that they lead to results of calculation which agree with calculations. * * Neither let any one, so far as hypotheses are concerned, expect anything *certain* from astronomy ; since that science can afford nothing of the kind ; lest, in case he should adopt for truth things feigned for another purpose, he should leave this study more foolish than he came. * * The hypothesis of the terrestrial motion was *nothing but an hypothesis*, valuable only so far as it explained phenomena, and not considered with reference to absolute truth or falsehood.” The

* “ An Account of Sir Isaac Newton’s Discoveries.” By Professor Maclaurin, M.A., F.R.S., of the Chair of Mathematics in the University of Edinburgh.

Newtonian and all other "systems of nature" are little better than the "hypothesis of the terrestrial motion" of Copernicus. The foundations or premises are always unproved; no proof is ever attempted; the necessity for it is denied; it is considered sufficient that the assumptions shall *seem* to explain the phenomena selected. In this way it is that one theory supplants another; that system gives way to system as one failure after another compels opinions to change. This will ever be so; there will always exist in the mind a degree of uncertainty; a disposition to look upon philosophy as a vain pretension; a something almost antagonistic to the highest aspirations in which humanity can indulge, unless the practice of theorising be given up, and the method of simple inquiry, the "zetetic" process be adopted. "Nature speaks to us in a peculiar language; in the language of phenomena, she answers at all times the questions which are put to her; and such questions are experiments."* Not experiments only which corroborate what has previously been *assumed* to be true; but experiments in every form bearing on the subject of inquiry, before a conclusion is drawn or premises affirmed.

We have an excellent example of zetetic reasoning in an arithmetical operation; more

* "Liebig's Agricultural Chemistry," p. 39.

especially so in what is called the "Golden Rule," or the "Rule-of-Three." If one hundred weight of any article is worth a given sum, what will some other weight of that article be worth? The separate figures may be considered as the elements or facts of the inquiry; the placing and working of these as the logical arrangement; and the quotient or answer as the fair and natural deduction. Hence, in every zetetic process, the conclusion arrived at is essentially a quotient, which, if the details be correct, must, of necessity, be true beyond the reach or power of contradiction.

In our courts of Justice we have also an example of the zetetic process. A prisoner is placed at the bar; evidence for and against him is advanced; it is carefully arranged and patiently considered; and only such a verdict given as could not in justice be avoided. Society would not tolerate any other procedure; it would brand with infamy whoever should assume a prisoner to be guilty, and prohibit all evidence but such as would corroborate the assumption. Yet such is the character of theoretical philosophy!

The zetetic process is also the natural method of investigation; nature herself teaches it. Children invariably seek information by asking questions—by earnestly inquiring from those

around them. Question after question in rapid and exciting succession will often proceed from a child, until the most profound in learning and philosophy will feel puzzled to reply. If then both nature and justice, as well as the common sense and practical experience of mankind demand, and will not be content with less or other than the zetetic process, why should it be ignored and violated by the learned in philosophy? Let the practice of theorising be cast aside as one fatal to the full development of truth ; oppressive to the reasoning power ; and in every sense inimical to the progress and permanent improvement of the human race.

If then we adopt the zetetic process to ascertain the true figure and condition of the Earth, we shall find that instead of its being a globe, and moving in space, it is the directly contrary—A PLANE ; without motion, and unaccompanied by anything in the Firmament analogous to itself.

If the Earth is a globe, and 25,000 miles in circumference, the surface of all standing water must have a certain degree of convexity—every part must be an arc of a circle, curvating from the summit at the rate of 8 inches per mile multiplied by the square of the distance. That this may be sufficiently understood, the following quotation is given from the *Encyclopædia*

THERE IS NO SINGLE SOUTH POLE, ONLY A RING OF SOUTH POLES LIKE A RING ELECTROMAGNET ON A FLAT EARTH.

“Far, far away is the magnetic South Pole—the South Pole that a compass would point you to. Its current location is 1,800 miles away from the geographic South Pole, in the Southern Ocean, at a latitude of 65° S, so far north that it’s not even in the Antarctic circle.”

<http://icestories.exploratorium.edu/dispatches/big-ideas/the-south-poles/index.html>

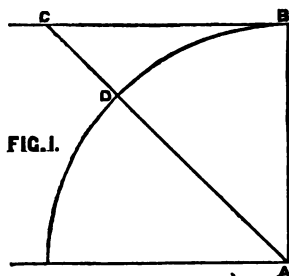
The South Pole(s)



A person is silhouetted by the South Pole sunset in early April.

When you imagine the South Pole, what do you see? An empty, frozen, white expanse with a red- and white-striped pole sticking out? Actually, there's more than one South Pole—and none of them exactly fits the above description.

Britannica, art. "Levelling." "If a line which crosses the plumb-line at right angles be continued for any considerable length it will rise above the Earth's surface (the Earth being globular); and this rising will be as the square of the distance to which the said right line is produced; that is to say, it is raised eight inches very nearly above the Earth's surface at one mile's distance; four times as much, or 32 inches, at the distance of two miles; nine times as much, or 72 inches, at the distance of three miles. This is owing to the globular figure of the Earth, and this rising is the difference between the true and apparent levels; the curve of the Earth being the true level, and the tangent to it the apparent level. So soon does the difference between the true and apparent levels become perceptible that it is necessary to make an allowance for it if the distance betwixt the two stations exceeds two chains.



the vertical line A. D. in C. will be the apparent

Let B. D. be a small portion of the Earth's circumference, whose centre of curvature is A. and consequently all the points of this arc will be on a level. But a tangent B. C. meeting

level at the point B. and therefore D. C. is the difference between the apparent and the true level at the point B.

The distance C. D. must be deducted from the observed height to have the true difference of level; or the differences between the distances of two points from the surface of the Earth or from the centre of curvature A. But we shall afterwards see how this correction may be avoided altogether in certain cases. To find an expression for C. D. we have Euclid, third book, 36 prop. which proves that $B. C^2 = C. D. (2 A D \times C D)$; but since in all cases of levelling C. D. is exceedingly small compared with 2 A. D., we may safely neglect C. D² and then $B. C^2 = 2 A. D \times C. D.$ or $C. D. = \frac{B. C^2}{2 A. D.}$. Hence the depression of the true level is equal to the square of the distance divided by twice the radius of the curvature of the Earth.

For example, taking a distance of four miles, the square of 4=16, and putting down twice the radius of the Earth's curvature as in round figures about 8000 miles, we make the depression on four miles = $\frac{16}{8000}$ of a mile = $\frac{16 \times 1760}{8000}$ yards = $\frac{176}{50}$ yards = $\frac{528}{50}$ feet, or rather better than 10½ feet.

Or, if we take the mean radius of the Earth as the mean radius of its curvature, and consequently 2 A. D.=7,912 miles, then 5,280 feet being 1 mile, we shall have C. D. the depression in inches = $\frac{5280 \times 12 \times B. C^2}{7912} = 8008 B. C^2$ inches.

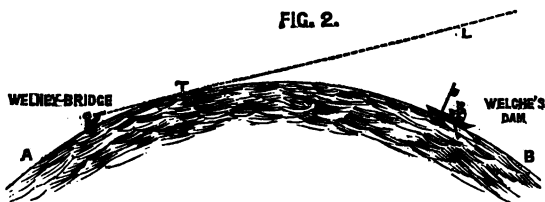
The preceding remarks suppose the visual ray C. B. to be a straight line, whereas on account of the unequal densities of the air at different distances from the Earth, the rays of light are incurvated by refraction. The effect of this is to lessen the difference between the true and apparent levels, but in such an extremely variable and uncertain manner that if any constant or fixed allowance is made for it in formulæ or tables, it will often lead to a greater error than what it was intended to obviate. For though the refraction may at a mean compensate for about a seventh of the curvature of the earth, it sometimes exceeds a fifth, and at other times does not amount to a fifteenth. We have, therefore, made no allowance for refraction in the foregone formulæ."

If the Earth is a globe, there cannot be a question that, however irregular the *land* may be in form, the *water* must have a convex surface. And as the difference between the true and apparent level, or the degree of curvature would be 8 inches in one mile, and in every succeeding mile 8 inches multiplied by the square of the distance, there can be no difficulty in detecting either its actual existence or proportion. Experiments made upon the sea have been objected to on account of its constantly-changing altitude ; and the existence of banks and channels which pro-

duce a “a crowding” of the waters, currents, and other irregularities. Standing water has therefore been selected, and many important experiments have been made, the most simple of which is the following :—In the county of Cambridge there is an artificial river or canal, called the “Old Bedford.” It is upwards of twenty miles long, and passes in a straight line through that part of the fens called the “Bedford level.” The water is nearly stationery—often entirely so, and throughout its entire length has no interruption from locks or water-gates ; so that it is in every respect well adapted for ascertaining whether any and what amount of convexity really exists. A boat with a flag standing three feet above the water, was directed to sail from a place called “Welney Bridge,” to another place called “Welche’s Dam.” These two points are six statute miles apart. The observer, with a good telescope, was seated in the water as a bather (it being the summer season), with the eye not exceeding eight inches above the surface. The flag and the boat down to the water’s edge were clearly *visible throughout the whole distance* ! From this observation it was concluded that the water did not decline to any degree from the line of sight ; whereas the water would be 6 feet higher in the centre of the arc of 6 miles extent than at the two places Welney

Bridge and Welche's Dam ; but as the eye of the observer was only eight inches above the water, the highest point of the surface would be at one mile from the place of observation ; below which point the surface of the water at the end of the remaining five miles would be 16 feet 8 inches ($5^2 \times 8 = 200$ inches). This will be rendered clear by the following diagram :—

FIG. 2.

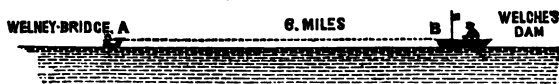


Let A B represent the arc of water from Welney Bridge to Welche's Dam, six miles in length ; and A L the line of sight, which is now a tangent to the arc A B ; the point of contact, T, is 1 mile from the eye of the observer at A ; and from T to the boat at B is 5 miles ; the square of 5 miles multiplied by 8 inches is 200 inches, or, in other words, that the boat at B would have been 200 inches or above 16 feet below the surface of the water at T ; and the flag on the boat, which was 3 feet high, would have been 13 feet below the line-of-sight, A T L !!

From this experiment it follows that the surface of standing water is *not convex*, and

therefore *that the Earth* IS NOT A GLOBE! On the contrary, this simple experiment is all-sufficient to prove that the surface of the water is parallel to the line-of-sight, and is therefore horizontal, and that the Earth *cannot* be other than A PLANE! In diagram Figure 3 this is perfectly illustrated.

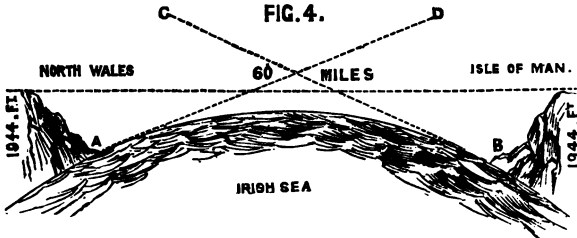
FIG.3.



A B is the line-of-sight, and C D the surface of the water equidistant from or parallel to it throughout the whole distance observed.

Although, on account of the variable state of the water, objections have been raised to experiments made upon the sea-shore to test the convexity of the flood or ebb-tide level, none can be urged against observations made from higher altitudes. For example,—the distance across the Irish Sea between Douglas Harbour, in the Isle of Man, and the Great Orm's Head in North Wales is 60 miles. If the earth is a globe, the surface of the water would form an arc 60 miles in length, the centre of which would be 1,944 feet higher than the coast line at either end, so that an observer would be obliged to attain this altitude before he could see the Welsh

coast from the Isle of Man: as shown in the diagram, Figure 4.



It is well known, however, that from an altitude not exceeding 100 feet the Great Orm's Head is visible in clear weather from Douglas Harbour. The altitude of 100 feet could cause the line of sight to touch the horizon at the distance of nearly 13 miles; and from the horizon to Orm's Head being 47 miles, the square of this number multiplied by 8 inches gives 1472 feet as the distance which the Welsh coast line would be below the line of sight B C.—A representing the Great Orm's Head, which, being 600 feet high, its summit would be 872 feet below the horizon.

Many similar experiments have been made across St. George's Channel, between points near Dublin and Holyhead, and always with results entirely incompatible with the doctrine of rotundity.

Again, it is known that the horizon at sea, whatever distance it may extend to the right

SO WHAT YOU ARE SAYING IS THAT THIS HAPPENS



SA TRUTH TROOPER



LIKE THIS

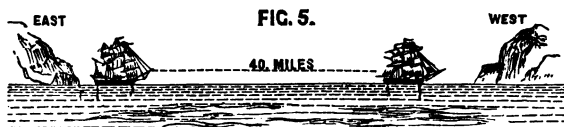


WHILE WE ARE SPINNING AROUND LIKE THIS



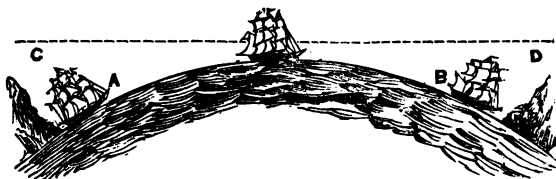
AT THE SAME TIME WE ARE SPINNING LIKE THIS BUT POLARIS NEVER CHANGES PARALLAX WITH 3 SEPERATE ROTATIONS??

and left of the observer on land, always appears as a straight line. The following experiment has been tried in various parts of the country. At Brighton, on a rising ground near the race course, two poles were fixed in the earth six yards apart, and directly opposite the sea. Between these poles a line was tightly stretched parallel to the distant horizon. From the centre of the line the view embraced not less than 20 miles on each side, making a distance of 40 miles. A vessel was observed sailing directly westwards; the line cut the rigging a little above the bulwarks, which it did for several hours or until the vessel had sailed the whole distance of 40 miles. This will be understood by reference to the diagram, Figure 5.



If the Earth were a globe, the appearance would be as represented in Figure 6.

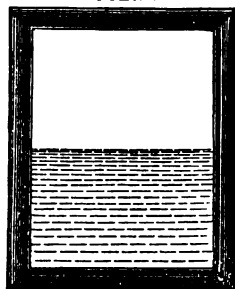
FIG. 6.



The ship coming into view from the east would have to ascend an inclined plane for 20 miles until it arrived at the centre of the arc A B, whence it would have to descend for the same distance. The square of 20 miles multiplied by 8 inches gives 266 feet as the amount the vessel would be below the line C D at the beginning and at the end of the 40 miles.

If we stand upon the deck of a ship, or mount to the mast head ; or go to the top of a mountain, or ascend above the Earth in a balloon, and look over the sea, the surface appears as a vast inclined plane rising up until in the distance it intercepts the line of sight. If a good mirror be held in the opposite direction, the horizon will be reflected as a well-defined mark or line across the centre, as represented in diagram, Figure 7.

FIG. 7.



Ascending or descending, the distant horizon does the same. It rises and falls with the

observer, and is always on a level with his eye. If he takes a position where the water surrounds him—as at the mast-head of a ship out of sight of land, or on the summit of a small island far from the mainland, the surface of the sea appears to rise up on all sides equally and to surround him like the walls of an immense amphitheatre. He seems to be in the centre of a large concavity, the edges of which expand or contract as he takes a higher or lower position. This appearance is so well known to sea-going travellers that nothing more need be said in its support. But the appearance from a balloon is familiar only to a small number of observers, and therefore it will be useful to quote from those who have written upon the subject.

“The Apparent Concavity of the Earth as seen from a Balloon.—A perfectly-formed circle encompassed the visible planisphere beneath, or rather the concavo-sphere it might now be called, for I had attained a height from which the surface of the Earth assumed a regularly hollowed or concave appearance—an optical illusion which increases as you recede from it. At the greatest elevation I attained, which was about a mile-and-a-half, the appearance of the World around me assumed a shape or form like that which is made by placing two watch-glasses together by their edges, the balloon apparently in the central cavity all the time of its flight at that elevation.”
—*Wise's Aeronautics.*

“Another curious effect of the aerial ascent was, that the Earth, when we were at our greatest altitude, positively appeared *concave*, looking like a huge dark bowl, rather than

the convex sphere such as we naturally expect to see it. * * * The horizon always appears to be on a level with our eye, and seems to rise as we rise, until at length the elevation of the circular boundary line of the sight becomes so marked that the Earth assumes the anomalous appearance as we have said of a *concave* rather than a *convex* body.”—*Mayhew’s Great World of London.* •

Mr. Elliott, an American æronaut, in a letter giving an account of his ascension from Baltimore, thus speaks of the appearance of the Earth from a balloon :—

“ I don’t know that I ever hinted heretofore that the æronaut may well be the most sceptical man about the rotundity of the Earth. Philosophy imposes the truth upon us; but the view of the Earth from the elevation of a balloon is that of an immense terrestrial basin, the deeper part of which is that directly under one’s feet. As we ascend, the Earth beneath us seems to recede—actually to sink away—while the horizon gradually and gracefully lifts a diversified slope stretching away farther and farther to a line that, at the highest elevation, seems to close with the sky. Thus upon a clear day, the æronaut feels as if suspended at about an equal distance between the vast blue oceanic concave above, and the equally expanded terrestrial basin below.”

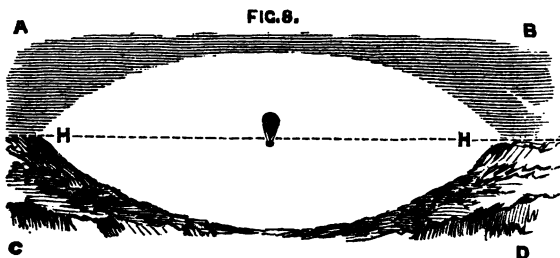
“The chief peculiarity of the view from a balloon, at a considerable elevation, was the altitude of the horizon, which remained practically on a level with the eye at an elevation of two miles, causing the surface of the Earth to appear *concave* instead of *convex*, and to recede during the rapid ascent, whilst the horizon and the balloon seemed to be stationary.”—*London Journal*, July 18, 1857.

During the important balloon ascents recently made for scientific purposes by Mr. Coxwell and

Mr. Glaisher, of the Royal Greenwich Observatory, the same phenomenon was observed—

“The horizon always appeared on a level with the car.”
—Vide “Glaisher’s Report.”

The following diagram represents this appearance :—

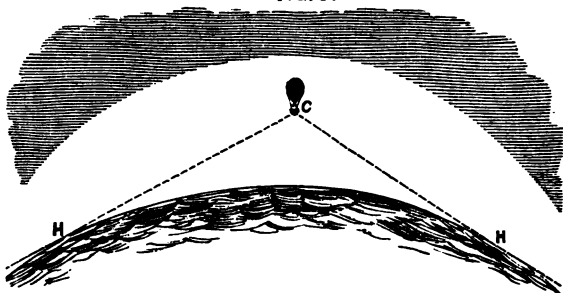


The surface of the earth C D appears to rise to the line-of-sight from the balloon, and “seems to close with the sky” at the points H H in the same manner that the ceiling and the floor of a long room, or the top and bottom of a tunnel appear to approach each other, and from the same cause, viz : that they are *parallel to the line-of-sight, and therefore horizontal.*

If the Earth’s surface were convex the observer, looking from a balloon, instead of seeing it gradually ascend to the level of the eye, would

have to look downwards to the horizon H H, as represented in figure 10, and the amount of dip

FIG. 9.



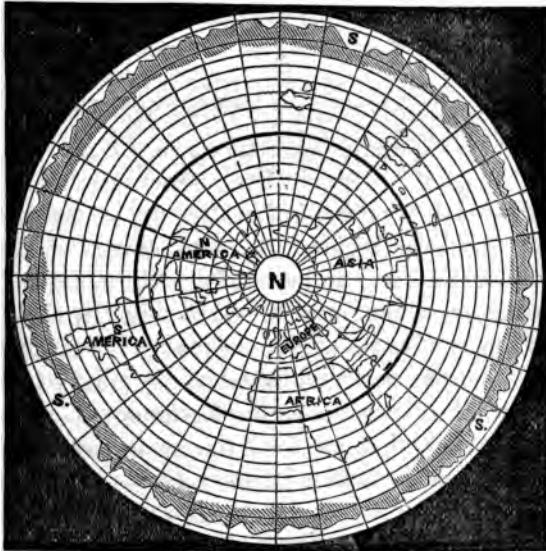
in the line-of-sight C H would be the greatest at the highest elevation.

Many more experiments have been made than are here described, but the selection now given is amply sufficient to prove that the surface of water is horizontal, and that the Earth, taken as a whole, its land and water together, is not a globe, has really no degree of sphericity ; but is " to all intents and purposes" A PLANE !

If we now consider the fact that when we travel by land or sea, and from any part of the known world, in a direction towards the North polar star, we shall arrive at one and the same point, we are forced to the conclusion that what has hitherto been called the North Polar region, is really THE CENTRE OF THE EARTH. That

from this northern centre the land diverges and stretches out, of necessity, towards a circumference, which must now be called **THE SOUTHERN REGION**: which is a vast circle, and not a pole or centre. That there is **ONE CENTRE—THE NORTH**, and **ONE CIRCUMFERENCE—THE SOUTH**. This language will be better understood by reference to the diagram Figure 10.

FIG. 10.



N represents the northern centre ; and S S S S the southern circumference—both icy or frozen

regions. That the south is an immense ring, or glacial boundary, is evident from the fact, that within the antarctic circle the most experienced, scientific, and daring navigators have failed in their attempts to sail, in a direct manner, completely round it. Lieut. Wilkes, of the American Navy, after great and prolonged efforts, and much confusion in his reckoning, and seeing no prospect of success, was obliged to give up his attempt and return to the north. This he acknowledged in a letter to Captain Sir James Clarke Ross, with whose intention to explore the south seas he had become acquainted, in which the following words occur: "I hope you intend to circumnavigate the antarctic circle. I made 70 degrees of it." Captain Ross, however, was himself greatly confused in his attempts to navigate the southern region. In his account of the voyage he says, at page 96—"We found ourselves every day from 12 to 16 miles by observation in advance of our reckoning." "By our observations we found ourselves 58 miles to the eastward of our reckoning in two days." And in this and other ways all the great navigators have been frustrated in their efforts, and have been more or less confounded in their attempts to sail round the Earth upon or beyond the antarctic circle. But if the southern region is a pole or centre, like the north, there would be

little difficulty in circumnavigating it, for the distance round would be comparatively small. When it is seen that the Earth is not a sphere, but a plane, having only one centre, the north ; and that the south is the vast icy boundary of the world, the difficulties experienced by circum-navigators can be easily understood.

Having given a surface or bird's-eye view of the Earth, the following sectional representation will aid in completing the description.

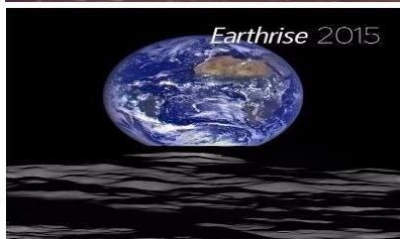


E E represents the Earth ; W W the " great deep," or the waters which surround the land ; N the northern centre ; and S S sections of the southern ice. As the present description is purely zetetic, and as every fact must therefore have its fullest value assigned to it, and its consequences represented, a peculiarity must be pointed out in the foregoing diagram. It will be observed that from about the points E E the surface of the water *rises* towards the south S S. It is clearly ascertained that the altitude of the water in various parts of the world is much influenced by the pressure of the atmosphere—however this

pressure is caused—and it is well known that the atmospheric pressure in the south is constantly less than it is in the north, and therefore the water in the southern region must always be considerably higher than it is in the northern. Hence the peculiarity referred to in the diagram. The following quotation from Sir James Ross's voyages, p. 483, will corroborate the above statements :—" Our barometrical experiments appear to prove that a gradual diminution of atmospheric pressure occurs as we proceed southwards from the tropic of Capricorn. * * * It has hitherto been considered that the mean pressure of the atmosphere at the level of the sea was nearly the same in all parts of the world, as no material difference occurs between the equator and the highest northern latitudes. * * * The causes of the atmospheric pressure being so *very much less* in the southern than in the northern hemispheres remains to be determined."

Thus, putting all theories aside, we have seen that direct experiment demonstrates the important truth, *that the Earth is an extended Plane*. Literally, "Stretched out upon the waters;" "Founded on the seas and established on the floods;" "Standing in the water and out of the water." How far the southern icy region extends horizontally, or how deep the waters upon and in which the earth stands or is

Earthrise 1968

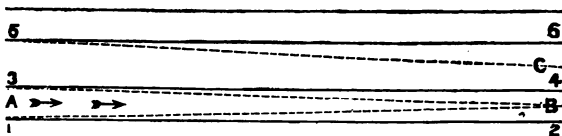


supported are questions which cannot yet be answered. In Zetetic philosophy the foundation must be well secured, progress must be made step by step, making good the ground as we proceed; and whenever a difficulty presents itself, or evidence fails to carry us farther, we must promptly and candidly acknowledge it, and prepare for future investigation; but never fill up the inquiry by theory and assumption. In the present instance there is no practical evidence as to the extent of the southern ice and the "great deep." Who shall say whether the depth and extent of the "mighty waters" *have* a limit, or constitute the "World without end?"

Having advanced direct and special evidence that the surface of the earth is not convex, but, on the contrary, a vast and irregular plane, it now becomes important that the leading phenomena upon which the doctrine of rotundity has been founded should be carefully examined. First, it is contended that because the hull of an outward-bound vessel disappears before the mast head, the water is convex, and therefore the Earth is a globe. In this conclusion, however, there is an assumption involved, viz., that such a phenomenon *can only* result from a convex surface. Inquiry will show that this is erroneous. If we select for observation a few miles of straight and level railway, we shall find that the rails,

which are parallel, appear in the distance to approach each other. But the two rails which are nearest together do so more rapidly than those which are farthest asunder, as shown in the following diagram, Figure 12.

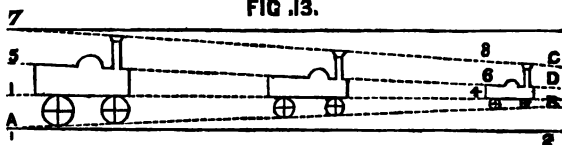
FIG. 12.



Let the observer stand at the point A, looking in the direction of the arrows; and the rails 1.2.3.4. will appear to join at the point B, but the rail 5.6 will appear to have converged only as far as C towards B.

Again, let a train be watched from the point A in Figure 13.

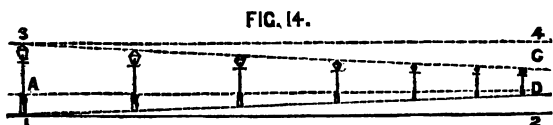
FIG. 13.



The observer looking from A, with his eye midway between the bottom of the carriage and the rail, will see the diameter of the wheels gradually diminish as they recede. The lines 1.2 and 1.4 will appear to approach each other until at the point B they will come together, and the space,

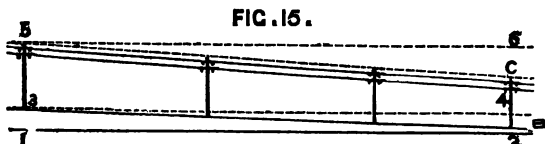
including the wheels, between the bottom of the carriage and the rail will there disappear. The floor of the carriage will seem to be sliding without wheels upon the rail 1.2; but the lines 5.6 and 7.8 will yet have converged only to C and D.

The same phenomenon may be observed with a long row of lamps, where the ground is a straight line throughout its entire length as represented in Figure 14.



The lines 1.2 and A D will converge at the point D and the pedestal of the lamp at D will seem to have disappeared, but the line 3.4, which represents the true altitude of the lamps, will only have converged to the point C.

A narrow bank running along the side of a straight portion of railway, upon which poles are placed for supporting the wires of the electric telegraph will produce the same appearance, as shown in Figure 15.



The bank having the altitude 1.3 and 2.4 will, in the distance of two or three miles (according to its depth) disappear to the eye of an observer placed at Figure 1 ; and the telegraph pole at Figure 2 will seem not to stand upon a bank at all, but upon the actual railway. The line 3.4 will merge into the line 1.2 at the point B, while the line 5.6 will only have descended to the position C.

Many other familiar instances could be given to show the true law of perspective; which is, that parallel lines appear in the distance to converge to one and the same datum line, but to reach it at different distances if themselves dissimilarly distant. This law being remembered, it is easy to understand how the hull of an outward-bound ship, although sailing upon a plane surface disappears before the mast-head. In Figure 16, let A B represent the surface of the water ; C H the line of sight ; and E D the altitude of the mast-head. Then, as A B and C H are

FIG. 16.



nearer to each other than A B and E D, they will converge and appear to meet at the point

H, which is the practical, or, as it would be better to call it, the *optical* horizon. The hull of the vessel being contained within the lines A B and C H, must gradually diminish as these converge, until at H, or the horizon, it enters the vanishing point and disappears; but the mast-head represented by the line E D is still *above* the horizon at H. and will require to sail more or less, according to its altitude, beyond the point H before it sinks to the line C H, or, in other words, before the lines A B and E D form the same angle as A B and C H.

It will be evident also that should the elevation of the observer be greater than at C, the horizon or vanishing point would not be formed at H, but at a greater distance; and therefore the hull of the vessel would be longer visible. Or, if, when the hull has disappeared at H, the observer ascends from the elevation at C to a higher position nearer to E, it will again be seen. Thus all these phenomena which have so long been considered as proofs of the Earth's rotundity are really optical sequences of the contrary doctrine. To argue that because the lower part of an outward-bound ship disappears before the highest the water must be round, is to *assume* that a *round* surface *only* can produce this effect! But it is now shown that a *plane* surface *necessarily* produces this

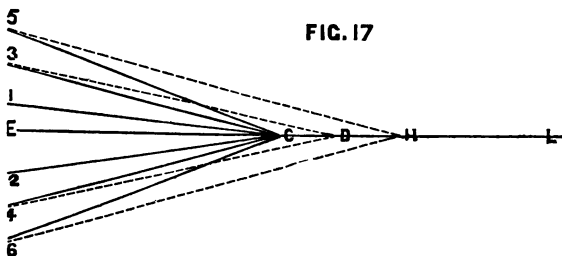
effect ; and therefore the assumption is not required, and the argument involved is fallacious !

It may here be observed that no help can be given to this doctrine of rotundity by quoting the prevailing theory of perspective. The law represented in the foregoing diagrams is the "law of nature." It may be seen in every layer of a long wall, in every hedge and bank of the roadside, and indeed in every direction where lines and objects run parallel to each other ; but no illustration of the contrary perspective is ever to be seen ! except in the distorted pictures, otherwise cleverly and beautifully drawn as they are, which abound in our public and private collections.

The theory which affirms that parallel lines converge only to one and the same point upon the eye-line is an error. It is true only of lines equidistant from the eye-line. It is true that parallel lines converge to one and the same *eye-line*, but *meet it at different distances when more or less apart from each other*. This is the true law of perspective as shown by Nature herself ; any other idea is fallacious and will deceive whoever may hold and apply it to practice.

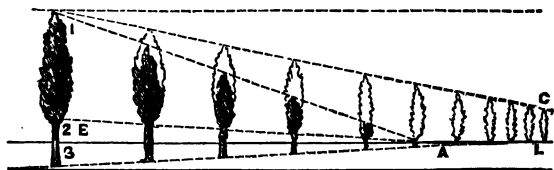
As it is of great importance that the difference should be clearly understood, the following

diagram is given. Let E L (Figure 17) represent the eye-line and C the vanishing point of



the lines, 1 C 2 C; then the lines 3.4.5.6, although converging *somewhere* to the line E L, will not do so to the point C, but 3 and 4 will proceed to D and 5 and 6 to H. It is repeated, that lines *equidistant* from the *datum* will converge on the *same point* and at the *same distance*; but lines *not* equidistant will converge on the same *datum* but at *different distances*! A very good illustration of the difference is given in Figure 18. Theoretic perspective would bring

FIG. 18.



the lines 1, 2, and 3 to the same *datum* line E L and to the *same point* A. But the true

or natural law would bring the lines 2 and 3 to the point A because equidistant from the eye-line E L ; but the line 1 being farther from E L than either 2 or 3, would be taken beyond the point A on towards C, until it formed the *same angle* upon the line E L as 2 and 3 form at the point A.

The subject of perspective will not be rendered sufficiently clear unless an explanation be given of the cause and character of what is technically called the "vanishing point." Why do objects, even when raised above the earth, vanish at a given distance? It is known, and can easily be proved by experiment, that "the range of the eye, or diameter of the field of vision is 110° ; consequently this is the *largest* angle under which an object can be seen. The range of vision is from 110° to 1° * * The *smallest* angle under which an object can be seen is upon an average for different sights the 60th part of a degree, or *one minute* in space ; so that when an object is removed from the eye 3000 times its own diameter, it will only just be distinguishable; consequently, the greatest distance at which we can behold an object, like a shilling, of an inch in diameter is 3000 inches or 250 feet"* It may, therefore, be very easily understood that a line passing over the hull of a ship, and con-

* "Wonders of Science," by Mayhew, p. 357.

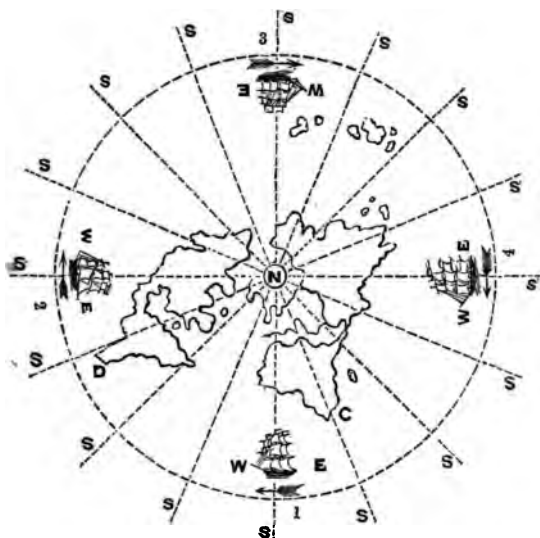
tinuing parallel to the surface of the water, must converge to the vanishing point at the distance of about 3000 times its own elevation ; in other words, if the surface of the hull be 10 feet above the water it will vanish at 3,000 times 10 feet ; or nearly six statute miles ; but if the mast-head be 30 feet above the water, it will be visible for 90,000 feet or over 17 miles ; so that it could be seen upon the horizon for a distance of eleven miles *after the hull had entered the vanishing point !* Hence the phenomenon of a receding ship's hull being the first to disappear, which has been so universally quoted and relied upon as proving the rotundity of the Earth is fairly and logically a proof of the very contrary ! It has been misapplied in consequence of an erroneous view of the law of perspective, and the desire to support a theory. That it is valueless for such a purpose has already been shown ; and that, even if there were no question of the Earth's form involved, it could not arise from the convexity of the water, is proved by the following experiment :— Let an observer stand upon the sea-shore with the eye at an elevation of about six feet above the water, and watch a vessel until it is just "hull down." If now a good telescope be applied the hull will be distinctly *restored to sight !* From which it must be concluded that it had

disappeared through the influence of perspective, and not from having sunk behind the summit of a convex surface ! Had it done so it would follow that the telescope had either carried the line-of-sight through the mass of water, or over its surface and down the other side ! But the power of "looking round a corner" or penetrating a dense and extensive medium has never yet been attributed to such an instrument ! If the elevation of the observer be much greater than six feet the distance at which the vanishing point is formed will be so great that the telescope may not have power enough to magnify or enlarge the angle constituting it ; when the experiment would appear to fail. But the failure would only be apparent, for a telescope of sufficient power to magnify at the horizon or vanishing point would certainly restore the hull at the greater distance.

An illustration or proof of the Earth's rotundity is also supposed to be found in the fact that navigators by sailing due east or west return in the opposite direction. Here, again, a supposition is involved, viz., that upon a globe *only* could this occur. But it is easy to prove that it could take place as perfectly upon a circular plane as upon a sphere. Let it first be clearly understood what is really meant by sailing *due east and west*. Practically it is

sailing at right angles to north and south : this is determined ordinarily by the mariners' compass, but more accurately by the meridian lines which converge to the northern centre of the Earth. Bearing this in mind, let N in Figure 19 represent the northern centre ;

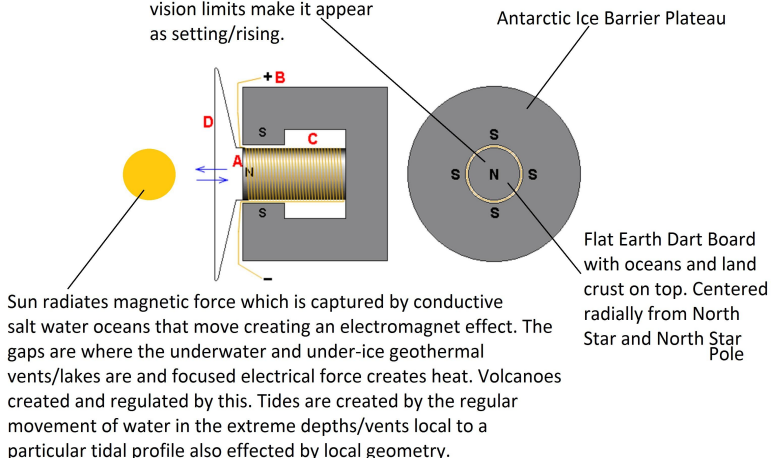
FIG.19.



and the lines N. S. the directions north and south. Then let the small arrow, Figure 1, represent a vessel on the meridian of Greenwich, with its head W. at right angles, or due west ; and the stern E. due east. It is evident that in

passing to the position of the arrow, Figure 2, which is still due west or square to the meridian, the arc 1.2 must be described; and in sailing still farther under the same condition, the arcs 2.3, 3.4, and 4.1 will be successively passed over until the meridian of Greenwich, Figure 1, is arrived at, which was the point of departure. Thus a mariner, by keeping the head of his vessel due west, or at right angles to the north and south, practically circumnavigates a plane surface; or, in other words, he describes a circle *upon a plane*, at a greater or lesser distance from the centre N, and being at all times square to the radii north and south, he is *compelled* to do so—*because* the earth is a plane, having a central region, towards which the compass and the meridian lines which guide him, converge. So far, then, from the fact of a vessel sailing due west coming home from the east, and *vice versa*, being a proof of the earth's rotundity, it is simply a phenomenon, consistent with and dependent upon its being a plane! The subject may be perfectly illustrated by the following simple experiment:—Take a round table, fix a pin in the centre; to this attach a thread, and extend it to the edge. Call the centre the north and the circumference the south; then, at any distance between the centre and the circumference, a direction at right angles to the thread

Sun moves radially between the tropic of capricorn/cancer circular latitudes. Perspective and vision limits make it appear as setting/rising.



will be due east and west; and a small object, as a pencil, placed across or square to the thread, to represent a ship, may be carried completely round the table without its right-angled position being altered; or, the right-angled position firmly maintained, the vessel must of necessity describe a circle on being moved from right to left or left to right. Referring again to the diagram, Figure 19, the vessel may sail from the north towards the south, upon the meridian Figure 1, and there turning due west, may pass Cape Horn, represented by D, and continue its westerly course until it passes the point C, or the Cape of Good Hope, and again reaches the meridian, Figure 1, upon which it may return to the north. Those, then, who hold that the earth is a globe because it can be circumnavigated, have an argument which is logically incomplete and fallacious. This will be seen at once by putting it in the syllogistic form :—

A globe *only* can be circumnavigated :

The Earth has been circumnavigated :

Therefore the Earth is a globe.

It has been shown that a *plane* can be circumnavigated, and therefore the first or major proposition is false ; and, being so, the conclusion is false. This portion of the subject furnishes a striking instance of the necessity of, at all times,

proving a proposition by direct and immediate evidence, instead of quoting a natural phenomenon as a proof of what has previously been assumed. But a theory will not admit of this method, and therefore the zetetic process, or inquiry before conclusion, entirely eschewing assumption, is the only course which can lead to simple and unalterable truth. Whoever creates or upholds a theory, adopts a monster which will sooner or later betray and enslave him, or make him ridiculous in the eyes of practical observers.

Closely following the subject of circumnavigation, the gain and loss of time discovered on sailing east and west is referred to as another proof of rotundity. But this illustration is equally fallacious with the last, and from the same cause, viz., the assumption that a *globe only* could produce the effect observed. It will be seen, by reference to diagram, Figure 19, that the effect must take place equally upon a plane as upon a globe. Let the ship, W E, upon the meridian, Figure 1, at 12 at noon, begin to sail towards the position, Figure 2, which it will reach the next day at 12, or in 24 hours: the sun during the same 24 hours will have returned only to Figure 1, and will require to move for another hour or more until it reaches the ship at Figure 2, making 25 hours instead of 24, in

which the sun would have returned to the ship, if it had remained at Figure 1. In this way, the sun is more and more behind the meridian time of the ship, as it proceeds day after day upon its westerly course, so that on completing the circumnavigation the ship's time is a day later than the solar time, reckoning to and from the meridian of Greenwich. But the contrary follows if the ship sails from Figure 1 towards Figure 4, or the east, because it will meet the sun one hour earlier than the 24 hours which would be required for it to pass on to Figure 1. Hence, on completing the circle 1.4.3.2.1, the time at the ship would be one day in advance of the time at Greenwich, or the position Figure 1. Captain Sir J. C. Ross, at page 132, vol. 2, says—“November 25, having by sailing to the eastward gained 12 hours, it became necessary, on crossing the 180th degree and entering upon west longitude, in order to have our time correspond with that of England, to have two days following of the same date, and by this means lose the time we had gained, and still were gaining, as we sailed to the eastward.”

In further illustration of this matter, and to impress the mind of the readers with its importance as an evidence in support of the theory of

the earth's sphericity, several authors have given the following story :—Two brothers, twins, born within a few minutes of each other, and therefore of the same age, on growing to manhood went to sea. They both circumnavigated the earth, but in opposite directions ; and when they again met, one was a day older than the other !

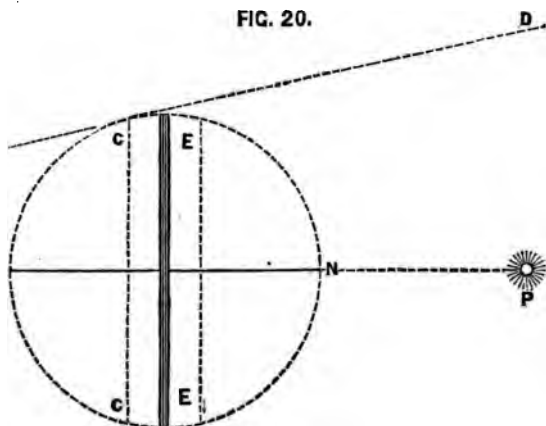
Whatever truth there may be in this account, it is here shown to be no more favourable to the idea of rotundity than it is to the opposite fact that the earth is a plane ; as both forms will permit of the same effect

Another phenomenon supposed to prove rotundity, is found in the fact that Polaris, or the north polar star, gradually sinks to the horizon as the mariner approaches the equator, on passing which it becomes invisible. First, it is an ordinary effect of perspective for an object to appear lower and lower as the observer recedes. Let any one try the experiment of looking at a lighthouse, church spire, monument, gas-lamp, or other elevated object, from the distance of a few yards, and notice the angle at which it is observed : on going farther away, the angle will diminish and the object appear lower, until, if the distance be sufficiently great, the line-of-sight to the object, and the apparently

ascending surface of the Earth upon which it stands will converge to the angle which constitutes the vanishing point ; at a single yard beyond which it will be invisible. This, then, is the necessary result of the everywhere visible law of perspective operating between the eye-line and the plane surface upon which the object stands ; and has no relation whatever to rotundity.

It is not denied that a similar depression of a distant object would take place upon a globe ; it is simply contended that it would not occur upon a globe exclusively. But if the Earth is a sphere and the pole star hangs over the northern axis, it would be impossible to see it for a single degree beyond the equator, or 90 degrees from the pole. The line-of-sight would become a tangent to the sphere, and consequently several thousand miles out of and divergent from the direction of the pole-star. Many cases, however, are on record of the north polar star being visible far beyond the equator, as far even as the tropic of Capricorn. In the *Times* newspaper of May 13, 1862, under the head of " Naval and Military Intelligence," it is stated that Captain Wilkins distinctly saw the Southern Cross and the polar star at midnight in 23°53' degrees of latitude, and longitude 35°46'.

This would be utterly impossible if the Earth were a globe, as shown in the diagram, Figure 20.



Let N represent the north pole, E E the equator, C C the tropic of Capricorn, and P the polar star. It will be evident that the line-of-sight C D being a tangent to the Earth beyond the equator E must diverge from the axis N and could not by any known possibility cause the star P to be visible to an observer at C. No matter how distant the star P, the line C D being divergent from the direction N P could never come in contact with it. The fact, then, that the polar star has often been seen from *many degrees* beyond the equator, is really an

important argument against the doctrine of the Earth's rotundity.

It has been thought that because a pendulum vibrates more rapidly in the northern region than at the equator, the Earth is thereby proved to be a globe ; and because the variation in the velocity is not exactly as it should be if all the surface of the Earth were equidistant from the centre, it has been concluded that the Earth is an oblate spheroid, or that its diameter is rather less through the poles than it is through the equator. The difference was calculated by Newton to be the 235th part of the whole diameter ; or that the polar was to the equatorial diameter as 689 to 692. Huygens gave the proportion as 577 to 875 or a difference of about one-third of the whole diameter. Others have given still different proportions ; but recently the difference of opinion has become so great that many have concluded that the Earth is really instead of oblate an *oblong* spheroid. It is certain that the question when attempted to be answered by measuring arcs of the meridian, is less satisfactory than was expected. This will be evident from the following quotation from the account of the ordnance survey of Great Britain, which was conducted by the Duke of Richmond, Col. Mudge, General Roy, Mr. Dalby, and others,

who measured base lines on Hounslow Heath and Salisbury Plain with glass rods and steel chains : “ when these were connected by a chain of triangles and the length computed the result did not differ more than one inch from the actual measurements—a convincing proof of the accuracy with which all the operations had been conducted.

The two stations, of Beachy Head in Sussex and Dunnose in the Isle of Wight, are visible from each other, and more than 64 miles asunder, nearly in a direction from east to west ; their exact distance was found by the geodetical operations to be 339,397 feet (64 miles and 1477 feet). The azimuth, or bearing of the line between them with respect to the meridian, and also the latitude of Beachy Head, were determined by astronomical observations. From these data the length of a degree perpendicular to the meridian was computed ; and this, compared with the length of a meridional degree in the same latitude, gave the proportion of the polar to the equatorial axis. The result thus obtained, however, differed considerably from that obtained by meridional degrees. It has been found impossible to explain the want of agreement in a satisfactory way. * * By comparing the celestial with the terrestrial arcs, the length of degrees in various parallels was determined

as in the following table :—

	Latitude of middle point.			Fathoms.
	°	'	"	
Arbury Hill and Clifton	52	50	29·8	60,766
Blenheim and Clifton	52	38	56·1	60,769
Greenwich and Clifton	52	28	5·7	60,794
Dunnose and Clifton	52	2	19·8	60,820
Arbury Hill and Greenwich	51	51	4·1	60,849
Dunnose and Arbury Hill ...	51	35	18·2	60,864
Blenheim and Dunnose	51	13	18·2	60,890
Dunnose and Greenwich	51	2	54·2	60,884

This table presents a singular deviation from the common rule ; for instead of the degrees *increasing* as we proceed from north to south, they appear to *decrease*, as if the Earth were an *oblong* instead of an *oblate* spheroid. * * The measurements of small arcs of the meridian in other countries have presented similar instances.”*

A number of French Academicians who measured above three degrees of the meridian in Peru, gave as the result of their labours the first degree of the meridian from the equator as 56,653 toises ; whilst another company of Academicians, who proceeded to Bothnia in Lapland, gave as the result of their calculation 57,422 toises for the length of a degree cutting the polar circle. But a more recent measurement made by the Swedish Astronomers in Bothnia shows the French to have been incorrect, having

* Encyclopædia of Geography, by Hugh Murray and several Professors in the University of Edinburgh.

given the degree there 196 toises more than the true length. Other observations have been made, but as no two sets of experiments agree in result, it would be very unsatisfactory to conclude from them that the Earth is an oblate spheroid.

Returning to the pendulum, it will be found to be equally unsatisfactory as a proof of this peculiar rotundity of the Earth. It is argued that as the length of a seconds pendulum at the equator is 39,027 inches, and 39,197 inches at the north pole, that the Earth must be a globe, having a less diameter through its axis than through its equator. But this proceeds upon the *assumption* that the Earth is a globe having a "centre of attraction of gravitation," towards which all bodies gravitate or fall; and as the pendulum is a falling body under certain restraint, the fact that it oscillates or falls more rapidly at the north than it does at the equator, is a proof that the north is nearer to the centre of attraction, or the centre of the Earth, than is the equatorial region; and, of course, if nearer, the radius must be shorter; and therefore the "Earth is a spheroid flattened at the poles." This is very ingenious and very plausible, but, unfortunately for its character as an argument, the essential evidence is wanting that the Earth is a globe at all! whether oblate or oblong, or truly spherical, are questions logically misplaced.

It should also be first proved that *no other* cause could operate besides greater proximity to the centre of gravity, to produce the variable oscillations of a pendulum. This not being attempted, the whole subject must be condemned as logically insufficient, irregular, and worthless for its intended purpose. Many philosophers have ascribed the alterations in the oscillations of a pendulum to the diminished temperature of the northern centre. That the heat gradually and almost uniformly diminishes on passing from the equator to the north is well ascertained. "The mean annual temperature of the whole Earth at the level of the sea is 50° Fah. For different latitudes it is as under :—

		Degrees.			Inches.
Latitude (Equator)	0 ...	84.2	Length of Pendulum	39,027	
"	" 10 ...	82.6	"	"	"
"	" 20 ...	78.1	"	"	"
"	" 30 ...	71.1	"	"	"
"	" 40 ...	62.6	"	"	"
"	(London) 50 ...	53.6	"	"	39,139
"	" 60 ...	45.0	"	"	"
"	" 70 ...	38.1	"	"	"
"	" 80 ...	33.6	"	"	"
"	(Pole) 90 ...	00.0	"	"	39,197**

" All the solid bodies with which we are surrounded are constantly undergoing changes of bulk corresponding to the variations of temperature. * * The expansion and contraction of metals by heat and cold form subjects of

* " Million of Facts," by Sir Richard Phillips, p. 475.

serious and careful attention to chronometer makers, as will appear by the following statements:—The length of the pendulum vibrating seconds, in vacuo, in the latitude of London ($51^{\circ} 31' 8''$ north), at the level of the sea, and at the temperature of 62° , has been ascertained with the greatest precision to be 39.13929 inches: now, as the metal of which it is composed is constantly subject to variation of temperature, it cannot but happen that its *length* is constantly varying; and when it is further stated that if the “bob” be let down 1-100th of an inch, the clock will lose 10 seconds in 24 hours; that the elongation of 1-1000th of an inch will cause it to lose one second per day; and that a change of temperature equal to 30° Fah. will alter its length 1-5000th part and occasion an error in the rate of going of 8 seconds per day, it will appear evident that some plan must be devised for obviating so serious an inconvenience.”*

From these data it is readily seen that the variations in the rate of a pendulum as it is carried from the equator towards the north are sufficiently explained, without supposing that they arise from a peculiar spheroidal form of the Earth.

Others have attributed the variable motions of the pendulum to increased density of the air

* “Noad’s Lectures on Chemistry,” p 41.

on going northwards. That the condition of the air must have some influence in this respect will be seen from the following extract from experiments on pendulums by Dr. Derham, recorded in numbers 294 and 480 of the *Philosophical Transactions* :—"The arches of vibration *in vacuo* were larger than in the open air, or in the receiver before it was exhausted ; the enlargement or diminution of the arches of vibration were *constantly proportional* to the *quantity of air*, or rarity, or density of it, which was left in the receiver of the air-pump. And as the *vibrations* were *longer or shorter*, so the *times* were accordingly, viz., two seconds in an hour when the vibrations were longest, and less and less as the air was re-admitted, and the vibrations shortened."

Thus there are two distinct and tangible causes which necessarily operate to produce the variable oscillations of a pendulum, without supposing any distortion in the supposed rotundity of the Earth. First, if the pendulum vibrates in the air, which is colder and therefore denser in the north than at the equator, it must be more or less resisted in its passage through it ; and, secondly, if it vibrates *in vacuo*, the temperature being less, the length must be less, the arcs of vibration less, and the velocity greater. In going towards the equator, the temperature

**A
S
T
H
E
C
O
W
F
L
I
E
S
O
N
A
F
L
A
T
E
A
R
T
H**

From Cape Town South Africa to Sydney Australia



This is how they show you the flight path

The distance from Cape Town to Sydney is

"6,837 miles
over the water ignoring winds, air traffic and..

RESTRICTED
FLIGHT ZONES "

Actual Flight Path:

Cape Town to Dubai: 4,752 miles- Dubai to Sydney: 7,487 miles.
A total of 12,239 miles.

5,402 miles more....



Why not stay in the Southern Hemisphere and fly due East?

Why travel far over the equator just to go further back South?

"There are NO DIRECT FLIGHTS
from Cape Town to Sydney"

The Shortest distance between two points is a straight line

ON A FLAT EARTH



United Nations
Official LOGO

33 segments
33 degrees
of
Freemasonry.

only
masons
were
on the
APOLLO
MISSIONS

There are
No real
Photographs
of the FULL
CIRCUMFERENCE
of the Earth from
space even after 50
years of so-called
Space Exploration....

Info taken from: Google Maps and

<http://www.contrafalcontransport Airlines/cheap flights from South Africa/cheap flights from Cape Town/cheap flights Cape Town Sydney.php2>

increases, the length becomes greater, the arcs increase, and the times of vibration diminish..

Another argument for the globular form of the Earth is the following :—The degrees of longitude radiating from the north pole gradually increase in extent as they approach the equator ; beyond which they again converge towards the south. To this it is replied that no actual measurement of a degree of longitude has ever been made south of the equator ! If it be said that mariners have sailed round the world in the southern region and have *computed* the length of the degrees, it is again replied that such evidence is unfavourable to the doctrine of rotundity. It will be seen from the following table of what the degrees of longitude would be if the earth were a globe of 25,000 miles circumference, and comparing these with the results of practical navigation, that the diminution of degrees of longitude beyond the equator is purely imaginary.

Latitudes at different longitudes :—

Latitude	1	=	59.99	nautical miles.
	10	=	59.09	" "
	20	=	56.38	" "
	30	=	51.96	" "
	34	=	49.74	(Cape Town)
	40	=	45.96	" "
	45	=	42.45	(Port Jackson, Sydney)
	50	=	38.57	" "
	56	=	33.55	(Cape Horn)
	60	=	30.00	" "

Latitude	65	=	25·36	nautical miles.
	70	=	20·52	" "
	75	=	15·53	" "
	80	=	10·42	" "
	85	=	5·53	" "
	86	=	4·19	" "
	87	=	3·14	" "
	88	=	2·09	" "
	89	=	1·05	" "
	90	=	0·00	" "

According to the above table (which is copied from a large Mercator's chart in the library of the Mechanics' Institute, Royal Hill, Greenwich), the distance round the Earth at the Antarctic circle would only be about 9,000 miles. But practical navigators give the distance from the Cape of Good Hope to Port Jackson as 8,000 miles; from Port Jackson to Cape Horn as 8,000 miles; and from Cape Horn to the Cape of Good Hope, 6,000 miles, making together 22,000 miles. The average longitude of these places is 45° , at which parallel the circuit of the Earth, if it be a globe, should only be 14,282 miles. Here, then, is an error between the theory of rotundity and practical sailing of 7,718 miles. But there are several statements made by Sir James Clarke Ross which tend to make the disparity even greater: at page 236, vol. 2, of "South Sea Voyages," it is said "From near Cape Horn to Port Philip (in Melbourne, Australia) the distance is 9,000 miles." These two places are 143 degrees of longitude from each

other. Therefore the whole extent of the Earth's circumference is a mere arithmetical question. If 143 degrees make 9,000 miles, what will be the distance made by the whole 360 degrees into which the surface is divided? The answer is, 22,657 miles; or, 8357 miles more than the theory of rotundity would permit. It must be borne in mind, however, that the above distances are nautical measure, which, reduced to statute miles, gives the actual distance round the Southern region at a given latitude as 26,433 statute miles; or nearly 1,500 miles more than the largest circumference ever assigned to the Earth at the equator.

But actual measurement of a degree of longitude in Australia or some other land far south of the equator can alone place this matter beyond dispute. The problem to be solved might be given as the following:—A degree of longitude in England at the latitude of 50° N. is $38\cdot57$ nautical or 45 statute miles; at the latitude of Port Jackson in Australia, which is 45° S., a degree of longitude, if the Earth is a globe, should be $42\cdot45$ nautical or $49\cdot52$ statute miles. But if the Earth is a plane, and the distances above referred to as given by nautical men are correct, a degree of longitude on the parallel of Port Jackson will be $69\cdot44$ statute miles, being a difference of $19\cdot92$ or nearly 20 statute miles.

In other words, a degree of longitude along the southern part of Australia ought to be, *if the Earth is a plane*, nearly 20 miles greater than a degree of longitude on the southern coast of England. This is the point which has yet to be settled. The day is surely not far distant when the scientific world will demand that the question be decided by proper geodetical operations ! And this not altogether for the sake of determining the true figure of the Earth, but also for the purpose of ascertaining, if possible, the cause of the many anomalies observed in navigating the southern region. These anomalies have led to the loss of many vessels and the sacrifice of a fearful amount of life and property. " In the southern hemisphere, navigators to India have often fancied themselves east of the Cape when still West, and have been driven ashore on the African coast, which according to their reckoning lay behind them. This misfortune happened to a fine frigate, the " Challenger," in 1845."* " Assuredly there are many shipwrecks from alleged errors in reckoning which *may* arise from a somewhat false idea of the general form and measurement of the Earth's surface. Such a subject, therefore, ought to be candidly and boldly discussed."†

* "Tour through Creation," by the Rev. Thomas Milner, M.A.

† "The Builder," Sept. 20, 1862, in a "review" of a recently-published work on Astronomy.

It is commonly believed that surveyors when laying out railways and canals, are obliged to allow 8 inches per mile for the Earth's curvature ; and that if this were not done in the latter case the water would not be stationary, but would flow on until at the end of one mile in each direction, although the canal should have the same depth throughout, the surface would stand 8 inches higher in the middle than at the ends. In other words, that the bottom of a canal in which the allowance of 8 inches per mile had not been made, would be a chord to the surface of the contained water, which would be an arc of a circle. To this it is replied, that both in regard to railways and canals, wherever an allowance has been attempted the work has not been satisfactory ; and so irregular were the results in the earlier days of railway, canal, and other surveying, that the most eminent engineers abandoned the practice of the old "forward levelling" and allowing for convexity ; and adopted what is now called the "double sight" or "back-and-fore sight" method. It was considered that whether the surface were convex or horizontal, or whether the convexity were more or less than the supposed degree, would be of no consequence in practice if the spirit level or theodolite were employed to read both backwards and forwards ; for whatever degree of convexity

existed, one "sight" would compensate for the other; and if the surface were horizontal, the same mode of levelling would apply. So important did the ordnance department of the Government consider this matter, that it was deemed necessary to make the abandonment of all ideas of rotundity compulsory, and in a standing order (No. 6) of the House of Lords as to the preparation of sections for railways, &c., the following language is used, "That the section be drawn to the same *horizontal* scale as the plan; and to a vertical scale of not less than one inch to every one hundred feet; and shall show the surface of the ground marked on the plan, the intended level of the proposed work, the height of every embankment, and the depth of every cutting; and a *datum* HORIZONTAL LINE, which shall be *the same throughout the whole length of the work*, or any branch thereof respectively; and shall be referred to some fixed point stated in writing on the section, near some portion of such work; and in the case of a canal, cut, navigation, turnpike, or other carriage road, or railway, near either of the termini." No. 44 of the standing orders of the House of Commons is similar to the above order (No. 6) of the House of Lords.

Thus it is evident that the doctrine of the Earth's rotundity cannot be mixed up with the

practical operations of civil engineers and surveyors, and to prevent the waste of time and the destruction of property which necessarily followed the doings of some who were determined to involve the convexity of the Earth's surface in their calculations, the very Government of the country has been obliged to interfere ! Every survey of this and other countries, whether ordnance or otherwise, is now carried out in connection with a horizontal datum, and therefore, as no other method proves satisfactory, it is virtually an admission by all the most practical scientific men of the day that the Earth *cannot be other than a plane !*

An argument for the Earth's convexity is thought by many to be found in the following facts :—"Fluid or semi-fluid substances in a state of motion invariably assume the globular form, as rain, hail, dew, mercury, and melted lead, which, poured from a great height becomes divided into spherical masses, as in the manufacture of small shot, &c." "There is abundant evidence from geology that the Earth has been a fluid or semi-fluid mass, and it could not, therefore, continue in a state of motion through space without becoming spherical." Without denying that the Earth has been, at some former period, in a pulpy or semi-fluid state, it is requisite to prove beyond all doubt that it has a

motion upon axes and through space, or the conclusion that it is therefore spherical is premature and illogical. It will be shown in a subsequent part of this work, that such axial and orbital motion does not exist, and therefore any argument founded upon and including it as a fact is necessarily fallacious. In addition to this, it may be remarked that the tendency in falling fluids to become globular is owing to what has been called "attraction of cohesion" (not "attraction of gravitation"), which is very limited in its operation. It is confined to small quantities of matter. If, in the manufacture of small shot, the melted metal is allowed to fall in masses of several ounces or pounds, instead of being divided into particles weighing only a few grains, it will never take a spherical form, and shot of an inch in diameter could not be made by this process. Bullets of even half-an-inch diameter can only be made by casting the metal into spherical moulds. In tropical countries, the rain instead of falling in drops or small globules, often comes down in large irregular masses, which have no approximation whatever to sphericity. So that it is manifestly unjust to affirm of large masses of matter like the Earth that which only belongs to minute portions or a few grains in weight. The whole matter taken together entirely fails as an argument for the Earth's rotundity.

Those who hold that the Earth is a globe will often affirm, with visible enthusiasm, that in an eclipse of the Moon there is proof positive of rotundity. That the shadow of the Earth upon the Moon is always round ; and that nothing but a globe could, in all positions, cast a circular shadow. Here again the essential requirements of an argument are wanting. It is *not proved* that the Moon is eclipsed *by a shadow*. It is *not proved* that the *Earth moves* in an orbit, and therefore takes *different positions*. It is *not proved* that the Moon receives her light from the Sun, and that therefore her surface is darkened by the Earth intercepting the Sun's light. It will be shown in the proper place that the Earth has no motion in space or on axes ; that it is not a shadow which eclipses the Moon ; that the Moon is not a reflector of the Sun's light, but is *self-luminous* ; and therefore could not possibly be obscured by *a shadow* from any object whatever. The subject is only introduced here because it forms one of the category of supposed evidences of the Earth's rotundity. But to call that an argument where every necessary proposition is assumed, is to stultify both the judgment and the reasoning powers !

Many place great reliance upon what is called the "spherical excess" observed in levelling, as a proof of the Earth's rotundity. In Castle's

Treatise on Levelling it is stated that "the angles taken between any three points on the surface of the Earth by the theodolite, are, strictly speaking, spherical angles, and their sum must exceed 180 degrees; and the lines bounding them are not the chords as they should be, but the tangents to the Earth. This excess is inappreciable in common cases, but in the larger triangles it becomes necessary to allow for it, and to diminish each of the angles of the observed triangle by one-third of the spherical excess. To calculate this excess, divide the area of the triangle in feet by the radius of the Earth in seconds and the quotient is the excess."

The following observation as made by surveyors, also bears upon the subject:—If a spirit-level or theodolite be "levelled," and a given point be read upon a graduated staff at the distance of about or more than 100 chains, this point will have an altitude slightly in excess of the altitude of the cross-hair of the theodolite; and if the theodolite be removed to the position of the graduated staff and again levelled, and a backward sight taken to the distance of 100 chains, another excess of altitude will be observed; and this excess will go on increasing as often as the experiment or backward and forward observation is repeated. From this it is argued that the line of sight from the spirit-level or

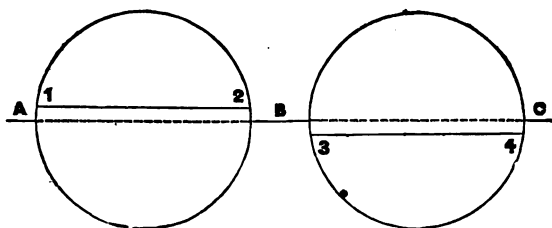
theodolite is a tangent, and that the surface of the Earth is therefore spherical.

Of a similar character is the following observation :—If a theodolite or spirit-level be placed upon the sea-shore, and “levelled,” and directed towards the sea, the line of the horizon will be observed to be a given amount below the cross-hair of the instrument, to which a certain dip, or inclination from the level will have to be given to bring the cross-hair and the sea horizon together. It is concluded that as the sea horizon is always observed to be below the cross-hair of the “levelled” theodolite, the line of sight is a tangent, the surface of the water convex, and therefore the Earth is a globe.

The conclusion derived from the last three observations is exceedingly plausible, and would completely satisfy the minds of scientific men as to the Earth’s sphericity if a perfect explanation could not be given. The whole matter has been specially and carefully examined ; and one very simple experiment will show that the effects observed do not arise from rotundity in the Earth’s surface, but from a certain peculiarity in the instruments employed. Take a convex lens or a magnifying glass and hold it over a straight line drawn across a sheet of paper. If the glass be so held that a part of the straight line can be seen *through* it, and another part seen

outside it, a difference in the *direction* of the line will be observed, as shown in the diagram Figure 21. Let A B C represent a straight line. If a

FIG. 21.



lens is now held an inch, or more, according to its focal length, over the part of the line A B, and the slightest amount out of its centre, that part of the line A B which passes under the lens will be seen in the direction of the figures 1.2 ; but if the lens be now moved a little out of its central position in the opposite direction, the line B C will be observed at 3.4, or below B C. A lens is a magnifying glass because it *dilates* or spreads out from its centre the objects observed through it. Therefore whatever is magnified by it is seen a little out of its axis or centre. This is again necessitated by the fact that the axis or actual centre is always occupied by the cross-hair. Thus the line-of-sight in the theodolite or spirit-level not being axial or

absolutely central, reads upon a graduated staff a position which is necessarily slightly divergent from the axis of vision ; and this is the source of that “spherical excess” which has so long been considered by surveyors as an important proof of the Earth’s rotundity. In this instance, as, indeed, in all the others given as evidence that the Earth is a globe, the premises do not fully warrant the conclusion—which is premature,—drawn before the whole subject is fairly examined ; and when other causes are amply sufficient to explain the effects observed.

SAR27

SR-71 BLACK BIRD TOP SPEED 2,200 MILES PER HOUR (3540.557 KM)



**"Artificial Horizon"
Level at night
Strategic
Reconnaissance
Aircraft
AKA SR-71**

**2,200mph/60mins=
36.6667 miles per minute
(59.01 km)**

**Spherical Trigonometry
shows that the curvature
drop parallel to the radius
is 896.54 feet (273.72m)
per min**

**IF THE EARTH WAS A BALL & FLYING LEVEL,
THE PILOT WOULD HAVE TO NOSE DOWN
896.54 FEET (273.27 METERS) FOR EVERY MINUTE
DISTANCE OF 36.6667 MILES FLYING LEVEL AT 2,200 MPH
BELOW THE AIRCRAFT DOWNWARD
TO GO ALONG THE EARTH'S CURVATURE... BUT IT DOESN'T.**

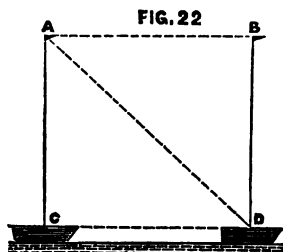


SECTION 2.

THE EARTH NO AXIAL OR ORBITAL MOTION.

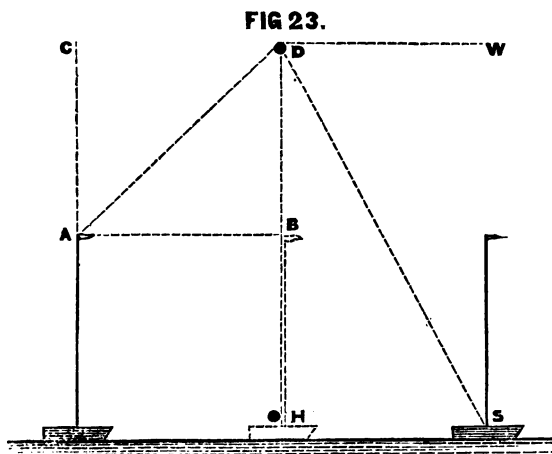
IF a ball be allowed to drop from the mast-head of a ship *at rest*, it will strike the deck at the foot of the mast. If the same experiment be tried with a ship *in motion*, the same result will be observed. Because, in the latter case, the ball is acted upon simultaneously by two forces at right angles to each other—one, the momentum given to it by the moving ship in the direction of its own motion, and the other the force of gravity, the direction of which is square to that of the momentum. The ball being acted upon by the two forces together will not go in the direction of either, but will take a diagonal

course, as shown in the following diagram, Figure 22.



The ball passing from A to C by the force of gravity, and having at the moment of its liberation received a momentum from the ship in the direction A B, will by the conjoint action of the two forces, take the direction A D, falling at D, just as it would have fallen at C had the vessel remained at rest. In this way, it is contended by those who hold that the Earth is a moving sphere, a ball allowed to fall from the mouth of a deep mine reaches the bottom in an apparently vertical direction, the same as it would if the Earth were motionless. So far, there need be no discussion—the explanation is granted. But now let the experiment be modified in the following way :—Let the ball be thrown *upwards from* the mast-head of a moving vessel ; it will partake as before of two

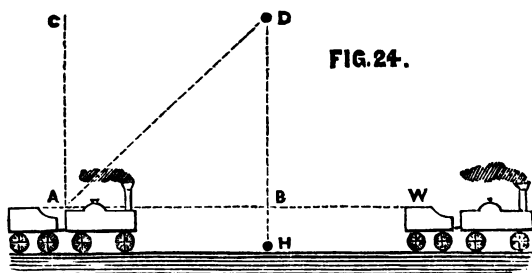
modified in the following way : let the ball be thrown *upwards* from the mast-head of a moving vessel ; it will partake as before of two motions, the upward and the horizontal, and will take a diagonal course upwards and with the vessel until the two forces expend themselves, when it will begin to fall by the force of gravity only, and drop into the water far behind the ship, which is still moving horizontally. Diagram Figure 23 will illustrate this effect.



The ball being thrown upwards in the direction A C, and the vessel moving from A to B, will cause it to pass in the direction A D, arriving at D when the vessel reaches B ; the two forces

having expended themselves when the ball arrives at D, it will begin to descend by the force of gravity in the direction D B H, but during its fall the vessel will have reached the position S, so that the ball will drop far behind it at the point H. To bring the ball from D to S *two forces* would be required, as D H and D W; but as D W does not exist, the force of gravity operates *alone*, and the ball necessarily falls behind the vessel at a distance proportionate to the altitude attained at D, and the time occupied in falling from D to H.

The same result will be observed on throwing a ball directly upwards from a railway carriage when in rapid motion, as shown in the following Figure 24. While the carriage or tender passes

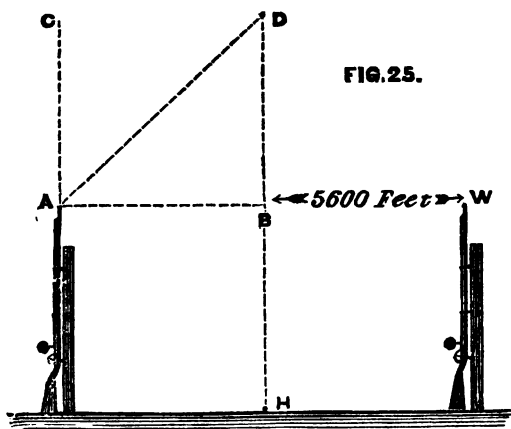


from A to B, the ball thrown from A to C will reach the position D, but while the ball then

comes down by the force of gravity, *operating alone*, to the point H, the carriage will have advanced to W, so that the ball will always drop more or less behind the carriage, according to the force first given to it in the direction A C and the time occupied in ascending to D, and thence descending to H. It is therefore demanded that if the Earth had a motion upon axes from west to east, and a ball, instead of being dropped down a mine or allowed to fall from the mast head of a ship, be *shot upwards* into the air ; from the moment of its beginning to descend the surface of the Earth would turn from under its direction, and it would fall behind or to the west of its line of descent. On making the experiment *no such effect is observed*, and therefore the conclusion is unavoidable, that the Earth DOES NOT MOVE UPON AXES !

The following experiment has been tried, with the object of obtaining definite results. If the Earth is a globe, having a circumference of 25,000 miles at the equator, the circumference at the latitude of London (51°) will be about 16,000 statute miles ; so that the motion of the Earth's surface, if 25,000 miles in 24 hours at the equator, in England would be more than 700 feet per second. An air-gun was firmly fixed to a strong post, as shown at A in Figure 25, and carefully adjusted by a plumb-line, so that it was

perfectly vertical. On discharging the gun, the



ball ascended in the direction A C, and invariably (during several trials) descended within a few inches of the gun at A ; twice it fell back upon the very mouth of the barrel. The average time that the ball was in the atmosphere was 16 seconds ; and, as half the time would be required for the ascent and half for the descent, it is evident that if the Earth had a motion once round its axis in 24 hours, the ball would have passed in 8 seconds to the point D, while the air-gun would have reached the position B H. The ball then commencing its descent, requiring also 8 seconds, would in that time have fallen to the point H, while the Earth and the gun would

have advanced as far as W. The time occupied being 8 seconds, and the Earth's velocity being 700 feet per second, the progress of the Earth and the air-gun to W, in advance of the ball at H, would be 5,600 feet! In other words, in these experiments, the ball, which always fell back to the place of its detachment, should have fallen 5,600 feet, or considerably more than one statute mile to the west of the air-gun! Proving beyond all doubt, that the supposed axial motion of the Earth DOES NOT EXIST!

The same experiment ought to suffice as evidence against the assumed motion of the Earth in an orbit; for it is difficult, if not impossible, to understand how the behaviour of the ball thrown from a vertical air-gun should be other in relation to the Earth's forward motion in space than it is in regard to its motion upon axes. Besides, if it is proved *not* to move upon axes, the assumption that it moves in an orbit round the Sun is useless for theoretical purposes, and there is no necessity for either denying or in any way giving it farther consideration. But that no point may be taken without direct evidence, let the following experiment be tried:—Take two carefully-bored iron tubes, about two yards in length, and place them, one yard asunder, on the opposite sides of a wooden frame, or a solid block of wood or

masonry ; so adjust them that their axes of vision shall be perfectly parallel to each other, and direct them to the plane of some notable fixed star, a few seconds previous to its meridian time. Let an observer be stationed at each tube ; and the moment the star appears in the first tube, let a knock or other signal be given, to be repeated by the observer at the second tube when he first sees the star. A distinct period of time will elapse between the signals given, showing that the same star is not visible at the same moment by two lines of sight parallel to each other and only one yard asunder. A slight inclination of the second tube towards the first would be required for the star to be seen at the same moment. If now the tubes be left in their position for six months, the same star will be visible at the same meridian time, without the slightest alteration being required in the direction of the tubes. From which result it is concluded that if the Earth had moved *a single yard* in an orbit through space there would at least be the difference of time indicated by the signals, and the slight inclination of the tube which the difference in position of one yard required. But as no such difference in the direction of the tube is required, the conclusion is unavoidable that in six months a given *meridian* upon the Earth has not moved a single

yard, and that therefore the Earth has not the slightest degree of orbital motion—or motion at right angles to the meridian of a given star ! It will be useless to say in explanation that the stars are so infinitely distant that a difference in the angle of inclination of the tube in six months could not be expected, as it will be proved in a subsequent section that *all* the stars are within a few thousand miles from the Earth's surface !



If this new NASA "photo"
of Earth and Moon
was Real...

Wouldn't the Earth from the Moon look more like:



This?



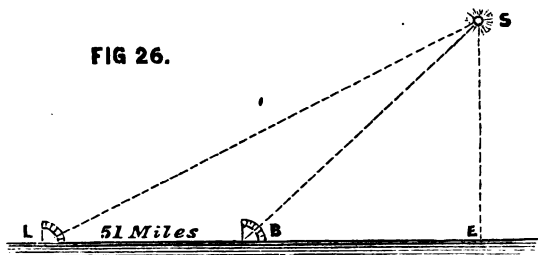
and not like This?

SECTION 3.

THE TRUE DISTANCE OF THE SUN AND STARS.

As it is now demonstrated that the Earth is a plane, the distance of the Sun and Stars may readily be measured by plane trigonometry. The base line in any operation being horizontal and always a carefully measured one, the process becomes exceedingly simple. Let the altitude of the Sun be taken on a given day at 12 o'clock at the high-water mark on the sea shore at Brighton, in Sussex ; and at the same hour at the high-water mark of the River Thames, near London Bridge ; the difference in the Sun's altitude taken simultaneously from two stations upon the same meridian, and the distance between the stations, or the length of the base line ascertained, are all the elements required for calculating the exact distance of the Sun

from London or Brighton ; but as this distance is the hypotenuse of a triangle, whose base is the Earth's surface, and vertical side the zenith distance of the Sun, it follows that the distance of the Sun from that part of Earth to which it is vertical is less than the distance from London. In the Diagram, Figure 26, let L B represent the base line from London to Brighton, a



distance of 51 statute miles. The altitude at L and at B taken at the same moment of time will give the distance L S or B S. The angle of altitude at L or B, with the length of L S or B S, will then give the vertical distance of the Sun S from E, or the place which is immediately underneath it. This distance will be thus found to be considerably less than 4,000 miles.

The following are the particulars of an observation made, a few years age, by the officers engaged in the Ordnance survey. Altitude of the Sun at London $55^{\circ} 13'$; altitude taken at

the same time, on the grounds of a public school, at Ackworth, in Yorkshire, $53^{\circ} 2'$; the distance between the two places in a direct line, as measured by triangulation, is 151 statute miles. From these elements the true distance of the Sun may be readily computed; and proved to be under 4,000 miles!

Since the above was written, an officer of the Royal Engineers, in the head-quarters of the Ordnance Survey, at Southampton, has furnished the following elements of observations recently made:—

Southern Station, Sun's altitude, 45°

Northern ditto, „ „ 38°

Distance between the two stations, 800 statute miles.

The calculation made from these elements gives the same result, viz., that the actual distance of the Sun from the Earth is less than 4,000 miles.


The same method of measuring distances applies equally to the Stars; and it is easy to demonstrate, beyond the possibility of doubt, so long as assumed premises are excluded, that all the visible objects in the firmament are contained within the distance of 6,000 miles!

From these demonstrable distances it follows unavoidably that the *magnitude* of the Sun, Moon, Stars, &c., is very small—much smaller than the Earth from which they are measured; and to which therefore they cannot possibly be other than secondary, and subservient.

SECTION 4.

THE SUN MOVES IN A CIRCLE OVER THE EARTH, CONCENTRIC WITH THE NORTH POLE.


As the Earth has been shown to be fixed, the motion of the Sun is a visible reality ; and if it be observed from any northern latitude, and for any period before and after the time of southing, or passing the meridian, it will be seen to describe an arc of a circle ; an object moving in an arc cannot return to the centre of such arc without having completed a circle. This the Sun does visibly and daily. To place the matter beyond doubt, the observation of the Arctic navigators may be referred to. Captain Parry, and several of his officers, on ascending high land in the vicinity of the north pole, repeatedly saw, for 24 hours together, the sun describing a circle upon the southern horizon.



SECTION 5.

THE DIAMETER OF THE SUN'S
PATH IS CONSTANTLY CHANGING
—DIMINISHING FROM DECEMBER
21ST TO JUNE 15TH, AND ENLARGING
FROM JUNE TO DECEMBER.

THIS is a matter of absolute certainty, proved by what is called, in technical language, the northern and southern declination, which is simply saying that the Sun's path is nearest the north pole in summer, and farthest away from it in winter. This difference in position gives rise to the difference of altitude, as observed at various periods of the year, and which is shewn in the following table, given in "The Illustrated London Almanack," for 1848, by Mr. Glaisher, of the Royal Observatory, Greenwich.



“Sun’s altitude at the time of Southing, or being on the meridian :—

				Sun’s altitude.	Time of Southing.	
					m. s. (Common clock, or London mean time.)	
June 15	...	...	...	62° ...	0 4	before noon.
„ 30	...	...	...	61½° ...	3 18	afternoon,
July 15	...	...	...	59¾° ...	5 38	“
„ 31	...	...	...	56½° ...	6 4	“
Aug. 15	...	...	...	52½° ...	0 11	“
„ 31	...	...	...	47° ...	0 5	“
Sep. 15	...	...	...	38¾° ...	4 58	before noon.
„ 30	...	...	...	35½° ...	10 6	“
Oct. 31	...	...	...	24° ...	16 14	“
Nov. 30	...	...	...	17° ...	10 58	“
Dec. 21	...	...	...	12° ...	0 27	“
„ 31	...	...	...	15° ...	3 29	afternoon.
Jan. 1	...	...	...	15½° ...	3 36	“
„ 15	...	...	...	17° ...	9 33	“
„ 31	...	...	...	21° ...	13 41	“
Feb. 15	...	...	...	25° ...	14 28	“
„ 29	...	...	...	30½° ...	12 43	“
March 15	{ On the Equator }			36° ...	9 2	“
	{ at 6 a.m. }			38½° ...	0 0	“
„ 21	...	...	...	42½° ...	4 10	before noon.
April 15	...	...	...	48° ...	0 8	“
„ 30	...	...	...	53° ...	2 58	“
May 15	...	...	...	57° ...	3 54	“
„ 31	...	...	...	60° ...	2 37	“

In the following diagram (Fig. 27) A A A represent the Sun’s daily path on December 21st, and B B B the same on June 15th. N the North Pole, S the Sun, E Great Britain. The figures 1 2 3 the Arctic Circle, and 4 5 6 the

extent of sunlight. The arrows show the direction of the Sun's motion.



A FEW JUDAEO-MASONIC OBELISKS SEXUAL MEMBER SYMBOL SEX "FORCE" WORSHIP



BIG BEN OBELISK
WITH PYRAMID OBELISK SHARD LIKE SAN
FRANCISCO HAS AS WELL



ARGENTINA



"washington" obelisk
with reflecting pool as
above so below
hermetic satanism

MASONIC OBELISKS

Saturn(Satan) V Obelisk for
launch(masonic sex ritual).
Earth is flat no rockets go to space
there is no space like they tell us.



The City,
London

Washington
Monument

Vatican

Vatican infiltration by kabbalists artists
architects in occultist "renaissance"
rosicrucian/english/german origins like it's
sister protestant movment. "Do as thou wilt"

SECTION 6.

CAUSE OF DAY AND NIGHT, SEASONS, &c.

The Sun S describes the circle A A A on the 21st December once in 24 hours ; hence in that period day and night occur to every part of the Earth, except within the Arctic circle. The light of the Sun gradually diminishing from S, to the Arctic circle 1 2 3, where it becomes twilight, does so according to the well-known law of radiation, equally in all directions—hence, the circle 4 5 6 represents the whole extent of the Sun's light at any given time. The arc 4 E is the advancing or morning twilight, and 6 E the receding or evening twilight ; to every place underneath a line drawn across the circle through S to N it is noonday. It will now be easily understood that as the Sun S moves in the direction of the arrows or from right to left, and completes the circle A A A in 24 hours, it will produce in that period morning, noon, evening, and night to all parts of the Earth in succession. On referring to the diagram, it will be seen that to England, E, the length of the day at this time of the year is the *shortest*, the amount of light being represented by the arc E E E ; and also that the northern centre N remains in darkness

during the whole daily revolution of the Sun, the light of which terminates at the Arctic circle 1 2 3. Thus, morning, noon, evening, midnight, the *shortest* days, or the Winter season, and the constant or six months' darkness at the pole are all a part of one general phenomenon. As the Sun's path begins now to diminish every day until in six months, or on the 15th of June, it describes the circle B B B, it is evident that the same extent of sunlight will reach over or beyond the pole N, as shown in the following diagram (Fig. 28), when morning, noon, evening, and night will again occur as before ; but the



amount of light passing over England, represented by the arc E E E, is now much larger than when the Sun was upon the circle A A A, and represents the *longest* days, or the *Summer* season, and the constant, or six months' light at the pole. Thus, day and night, long and short days, Winter and Summer, the long periods of alternate light and darkness at the pole, arise simply from the Sun's position in relation to the north pole.

If the Earth is a globe, it is evident that Winter and Summer, and long and short days, will be of the same character and duration in corresponding latitudes, in the southern as in the northern hemisphere. But we find that in many respects there is a marked difference; for instance, in New Zealand, where the latitude is about the same as in England, a remarkable difference exists in the length of day and night. In the Cook's Strait Almanack, for 1848, it is stated, "At Wellington, New Zealand, December 21, Sun rises 4h. 31m., and sets at 7h. 29m., the day being 14 hours 58 minutes. June 21st, Sun rises at 7h. 29m., and sets at 4h. 31m., the day being 9 hours and 2 minutes. In England the longest day is 16h. 34m., and the shortest day is 7h. 45m. Thus the *longest day* in New Zealand is 1 hour and 36 minutes *shorter* than the *longest day* in England; and the *shortest day* in New Zealand is 1 hour and

17 minutes *longer* than the shortest day in England."

In a recently published pamphlet, by W. Swainson, Esq., Attorney General, the following passage occurs :—" Compared with an English summer, that of Auckland is but little warmer, though much longer ; but the nights in New Zealand are always cool and refreshing. . . . The days are *one hour shorter* in the summer, and *one hour longer* in the winter than in England ! of *twilight* there is *little or none*."

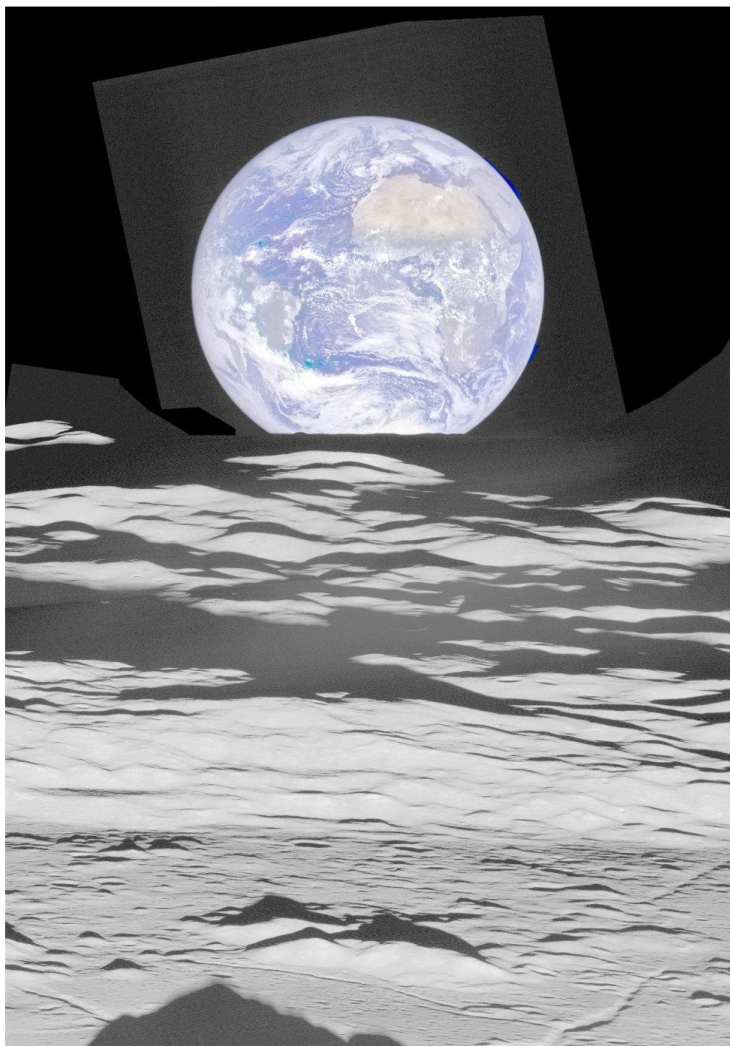
From a work, also recently published, on New Zealand, by Arthur S. Thompson, M.D., the following sentences are quoted :—" The summer mornings, even in the warmest parts of the colony are sufficiently fresh to exhilarate without chilling ; and the seasons glide imperceptibly into each other. The days are *an hour shorter* at *each end* of the day in summer, and an hour longer in winter than in England."

A letter from a correspondent in New Zealand, dated Nelson, September 15, 1857, contains the subjoined passages :—" Even in summer people here have no notion of going without fires in the evening ; but then, though the days are very warm and sunny, the nights are always cold. For seven months last summer we had not one day that the Sun did not shine as brilliantly as it *does* in England in the finest day in June ; and

though it has more power here, the heat is not nearly so oppressive. . . . But then there is not the twilight which you get in England. Here it is light till about eight o'clock ; then, in a few minutes, it becomes too dark to see anything, and the change comes over in almost no time." "Twilight lasts but a short time in so low a latitude as 28 degrees, and no sooner does the Sun peep above the horizon, than all the gorgeous parade by which he is preceded is shaken off, and he comes in upon us in the most abrupt and uncereemonious way imaginable."* These various peculiarities could not exist in the southern region if the Earth were spherical and moved upon axes, and in an orbit round the Sun. If the Sun is fixed, and the Earth revolves underneath it, the same phenomena should exist at the same distance on each side of the Equator. But such is not the case ! What can operate to cause the twilight in New Zealand to be so much more sudden than it is in England ? The southern "hemisphere" cannot revolve more rapidly than the northern ! The distance round *a globe* would be the same at 50° south as at 50° north, and as the whole globe would revolve once in 24 hours, the surface at the two places would move underneath the Sun with the same velocity, and the light would approach in the

* Captain Basil Hall, R.N., F.R.S.

morning and recede in the evening in exactly the same manner ; yet the *very contrary* is the fact ! The twilight in England in summer is slow and gradual, but in New Zealand it is rapid and abrupt ; a difference which is altogether incompatible with the doctrine of the Earth's rotundity. But, the Earth a plane, and it is a simple "matter of course." Let E, in Figure 28, represent England, and W New Zealand ; the radius N E and the consequent circle round N is much less than the radius N W and its consequent circle round the same point. But as the larger circle, radius N W is passed over by the sunlight in the same time (24 hours) as the smaller circle, radius N E, the velocity is proportionately greater. The velocity is the space passed over multiplied by the time in passing, and as the space over New Zealand is much greater than the space over England, the velocity of the Sun-light must be much greater, and its morning and evening twilight necessarily more "abrupt and uncereemonious ;" and *therefore*, it might be said with strictly logical accuracy, the Earth is a Plane, and cannot possibly be a Globe !



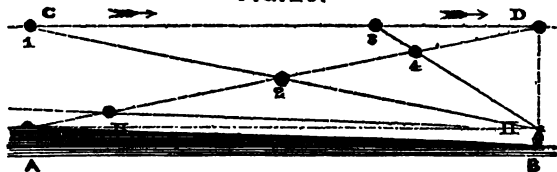
SECTION 7.

CAUSE OF "SUNRISE" AND "SUNSET."

ALTHOUGH the Sun is at all times above and parallel to the Earth's surface, he appears to ascend the firmament from morning until noon, and to descend and sink below the horizon at evening. This arises from a simple and everywhere visible law of perspective. A flock of birds, when passing over a flat or marshy country, always appears to descend as it recedes; and if the flock is extensive, the first bird appears lower, or nearer to the horizon than the last. When a balloon sails from an observer without increasing or decreasing its altitude, it appears gradually to approach the horizon. The farthest light in a row of lamps appears the lowest, although each one has the same altitude. Bearing these phenomena in mind, it will easily be seen how the Sun, although always parallel to the surface of the Earth, must appear to ascend when approaching, and descend after leaving the meridian or noon-day position. Let the line

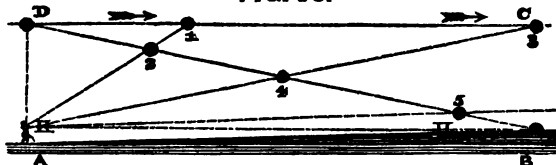
A B, Fig. 29, represent a portion of the Earth's surface ; C D of the Sun's path ; and H H, the

FIG. 29.



line of sight. The surface of the Earth, A B, will appear to ascend from B to H, forming the horizon. When the Sun is traversing the line C D, in the direction of the arrows, he will appear to emerge from the horizon H, and to gradually ascend the line H D. When in the position 1, he will *appear* to be at the point 2 ; and when at 3, the apparent position will be at 4 ; but when he arrives upon the meridian D, his apparent and actual, or noon-day position, will be the same. But now, from the point D, the Sun will appear to descend, as in Fig. 30, and when he

FIG. 30.



has passed from D to 1, he will appear at 2, and *when really* at 3 will appear at 4 ; and thus

continuing his course in the direction D C, he will reach the horizon at H, and disappear or "set" to the observer at H A. Thus "Sunrise" and "Sunset" are phenomena dependent entirely upon the fact that horizontal lines parallel to each other appear to approach or converge in the distance, the surface of the Earth being horizontal, and the line-of-sight of the observer and the Sun's path being parallel with it, necessarily produce the observed phenomena.

SECTION 8.

CAUSE OF SUN APPEARING LARGER WHEN RISING AND SETTING THAN WHEN ON THE MERIDIAN.

It is well known that when a light of any kind shines through a dense medium it will appear larger than when seen through a lighter medium. This will be more remarkable when the medium holds aqueous particles in solution,—as in a damp or foggy atmosphere the light of a gas-lamp will seem greater at a given distance than it will under ordinary circumstances. In the diagram, Figure 30, it is evident that H D is less than H 1, H 3, or H 5. The latter (H 5) represents the greater amount of atmosphere which the Sun has to shine through when approaching the horizon; and as the air near the Earth is both more dense and more damp, or holds more watery particles in solution, the light of the Sun must be dilated or enlarged as well as modified in colour. But the enlarged

appearance of the Sun when rising and setting is only an optical impression, as proved by actual measurement. "If the angle of the Sun or Moon be taken either with a tube or micrometer when they appear so large to the eye in the horizon, the measure is identical when they are in the meridian and appear to the eye and mind but half the size. The apparent distance of the horizon is three or four times greater than the zenith. Hence the mental mistake of horizontal size, for the angular dimensions are equal; the first 5° is apparently to the eye equal to 10° or 15° at 50° or 60° of elevation; and the first 15° fill a space to the eye equal to a third of the quadrant. This is evidently owing to the 'habit of sight,' for with an accurate instrument the measure of 5° near the horizon is equal to 5° in the zenith"*

* "Million of Facts," by Sir Richard Philips, p. 537.

SECTION 9.

CAUSE OF SOLAR AND LUNAR ECLIPSES.

AN Eclipse of the Sun is caused simply by the Moon passing before it, or between it and the observer on the Earth. Of this no question has been raised. But that an Eclipse of the Moon arises from a shadow of the Earth is in every respect unsatisfactory. The Earth has been proved to have no motion, either upon axes or in an orbit round the Sun, and therefore it could never come between the Sun and the Moon. The Earth is proved to be a Plane, always underneath the Sun and Moon, and therefore to speak of its intercepting the light of the Sun and thus casting its own shadow upon the Moon, is to say that which is impossible. Besides this, cases are on record of the Sun and Eclipsed Moon being above the horizon together. "The full Moon has sometimes been seen above the horizon before the Sun was set. A remarkable instance *of this kind* was observed at Paris on the 19th of

July, 1750, when the Moon appeared visibly Eclipsed while the Sun was distinctly to be seen above the horizon.”* “On the 20th of April, 1837, the Moon appeared to rise Eclipsed before the Sun had set. The same phenomenon was observed on the 20th of September, 1717.”† “In the lunar Eclipses of July 17, 1590 ; Nov. 3, 1648 ; June 16, 1666 ; and May 26, 1668, the Moon rose Eclipsed whilst the Sun was still apparently above the horizon. Those *horizontal* Eclipses were noticed as early as the time of Pliny.”‡ The Moon’s entire surface, or that portion presented to the Earth has also been distinctly seen during the whole time of a total Eclipse, a phenomenon utterly incompatible with the doctrine that the Earth’s shadow is the cause of it. “The Moon has sometimes shown during a total Eclipse with an almost unaccountable distinctness. On Dec. 22, 1703, the Moon, when totally immersed in the Earth’s shadow, was visible at Avignon by a ruddy light of such brilliancy that one might have imagined her body to be transparent, and to be enlightened from behind ; and on March 19th, 1848, it is

* “Astronomy and Astronomical Instruments,” p. 105, by Geo. G. Carey.

† “McCulloch’s Geography,” p. 85.

‡ “Illustrated London Almanack for 1864,” the astronomical part in which is by James Glaisher, Esq., of the Greenwich Observatory.

stated that so bright was the Moon's surface during its total immersion, that many persons could not be persuaded that it was eclipsed. Mr. Forster, of Bruges, states, in an account of that eclipse, that the light and dark places on the moon's surface could be almost as well made out as in an ordinary dull moonlight night.

"Sometimes, in a total lunar eclipse, the moon will appear quite obscure in some parts of its surface, and in other parts will exhibit a high degree of illumination. * * * To a certain extent I witnessed some of these phenomena during the merely partial eclipse of February 7th, 1860. * * * I prepared, during the afternoon of February 6th for witnessing the eclipse, without any distinct expectation of seeing much worthy of note. I knew, however, that upwards of eight-tenths of the disc would be covered, and I was anxious to observe with what degree of distinctness the eclipsed portion could be viewed, partly as an interesting fact, and partly with a view of verifying or discovering the weak points of an engraving (in which I am concerned) of a lunar eclipse.

"After seeing the increasing darkness of the penumbra softly merging into the true shadow at the commencement of the eclipse (about 1 o'clock a.m., Greenwich time) I proceeded with *pencil and paper*, dimly lighted by a distant lamp,

to note by name the different lunar mountains and plains (the so-called seas) over which the shadow passed. * * * During the first hour and ten minutes I had seen nothing unexpected. * * * I had repeatedly written down my observations of the remarkable clearness with which the moon's eclipsed outline could be seen, both with the naked eye, and with the telescope ; at 1 hour 58 minutes, however, I suddenly noted the ruddy colour of a *portion* of the moon. I may as well give my notes in the original words, as copied next day in a more connected form :—1h. 58m., Greenwich time. I am suddenly struck by the fact that the whole of the western seas of the moon are showing through the shadow with singular sharpness, and that the whole region where they lie has assumed a decidedly reddish tinge, attaining its greatest brightness at a sort of temporary polar region, having 'Endymion' about the position of its imaginary pole. I particularly notice that the 'Lake of Sleep' has disappeared in this brightness, instead of standing out in a darker shade : and I notice that this so-called polar region is not parallel with the rim of the shadow, but rather west of it.—2h. 15m. Some clouds, though very thin and transparent, now intervene. —2h. 20m. The sky is now cleared. How extraordinary is the appearance of the Moon !

Reddish is not the word to express it ; it is red—red hot ! I endeavour to think of various red objects with which to compare it, and nothing seems so like as a *red-hot penny*—a red-hot penny with a little *white-hot* piece at its lower edge, standing out against a dark-blue background ; only it is evidently not a mere disc, but beautifully rounded by shading.

“ Such is its appearance with the naked eye : with the telescope its surface varies more in tint than with the naked eye, and is not of quite so bright a red as when thus viewed. The redness continues to be most perceptible at a distance from the shadow’s southern edge, and to be greatest about the region of ‘Endymion.’ The Hercynian mountains (north of Grimaldus) are, however, of rather a bright red, and Grimaldus shows well. Mare Crisium and the western seas are wonderfully distinct. Not a trace to be seen of Aristarchus or Plato.—2h. 27m. It is now nearly the middle of the eclipse. The red colour is very brilliant to the naked eye. * * * After this, I noticed a progressive change of tint in the Moon.—2h. 50m. The Moon does not seem to the naked eye of so bright a red as before ; and again I am reminded by its tint of red-hot copper, or rather copper which has begun to cool. The whole of Grimaldi is now *uncovered*. Through the telescope I notice a

decided grey shade at the lower part of the eclipsed portion, and the various small craters give it a stippled effect, like the old aqua-tint engravings. The upper part is reddish, but two graceful bluish curves, like horns, mark the form of the Hercynian mountains, and the bright region on the other limb of the Moon. These are visible also to the naked eye.

“At 3h. 5m. the redness had almost disappeared; a very few minutes afterwards, no trace of it remained, and ere long clouds came on. I watched the Moon, however, occasionally gaining a glimpse of its disc, till a quarter to four o'clock, when, for the last time on that occasion, I saw it faintly appearing through the clouds, nearly a full Moon again; and then I took leave of it, feeling amply repaid for my vigil by the beautiful spectacle which I had seen.”*

Mr Walkey, who observed the lunar eclipse of March 19th, 1848, near Collumpton, says—
“The appearances were as usual till 20 minutes past 9; at that period, and for the space of the next hour, instead of an eclipse, or the shadow (umbra) of the Earth being the cause of the total obscurity of the Moon, the whole phase of that body became very quickly and most beautifully

* The Hon. Mrs. Ward, Trimleston House, near Dublin, in “Recreative Science,” p. 281.

illuminated; and assumed the appearance of the glowing heat of fire from the furnace, rather tinged with a *deep red*. * * * The whole disc of the Moon being as *perfect with light* as if there had been *no eclipse whatever!* * * * The Moon positively gave *good light from its disc during the total eclipse!*"*

In the astronomical portion of the "Illustrated London Almanack for 1864," by Mr. Glaisher, a beautiful tinted engraving is given representing the appearance of the Moon during the total eclipse of June 1, 1863, when all the light and dark places—the so-called mountains, seas, &c., were plainly visible. In the accompanying descriptive chapter, the following sentences occur :—"At the time of totality the Moon presented a soft woolly appearance, apparently more globular in form than when fully illuminated. Traces of the larger and brighter mountains were visible at the time of totality, and particularly the bright rays proceeding from Tycho, Kepler, and Aristarchus. * * * At first, when the obscured part was of small dimensions, it was of an iron grey tint, but as it approached totality, the reddish light became so apparent that it was remarked that the Moon 'seemed to be on fire;' and when the totality had commenced, it certainly looked like a fire

"* *Philosophical Magazine*," No. 220, for August, 1848.

smouldering in its ashes, and almost going out."

If then, the Sun and Moon have many times been seen above the horizon when the latter was eclipsed, how can it be said that the Earth's shadow was the cause of a lunar eclipse, when the Earth was not between or in a line with the Sun and Moon? And how can the Moon's non-luminous surface be distinctly visible and illuminated during the very totality of an eclipse, if all the light of the Sun is intercepted by the Earth?

Again, if the Moon is a sphere, which it is declared to be, how can its surface *reflect* the light of the Sun? If her surface was a mass of polished silver, it could not reflect from more than a mere point! Let a silvered glass ball or globe of considerable size be held before a lamp or fire of any magnitude, and it will be seen that instead of the whole surface reflecting light, there will be a very small portion only illuminated. But the Moon's *whole surface* is brilliantly illuminated! a condition or effect utterly impossible if it be spherical. The surface *might* be *illuminated* from the Sun, or any other source if opaque, instead of polished, like an ordinary silvered mirror, but it could not shine intensely from every part, and brightly illuminate the objects before it, as the Moon

does so beautifully when full and in a clear firmament. If the Earth *were admitted* to be globular, and to move, and to be capable of throwing a shadow by intercepting the light of the Sun, it would be impossible for a lunar eclipse to occur thereby, unless at the same time the Moon be proved to be non-luminous, and to shine only by reflection. But this is not proved ; it is only assumed as an essential part of a theory. The *contrary* is capable of proof, and proof beyond the power of doubt, viz., that the Moon is *self-luminous*, or shines with a light peculiar to herself, and therefore independently of the Sun. A reflector necessarily gives off what it receives. If a mass of red-hot metal be placed before a plane or concave surface, *heat* will be reflected. If snow or ice be similarly placed, *cold* will be reflected. If light, ordinary or coloured, be presented, the *same* will be reflected. If sound of a given pitch be produced, the same pitch will be reflected. If the note A be sounded upon a musical instrument, a reflector would not return the note B or C, but the *same note*, altered only in degree or intensity, but not in "pitch." A reflector receiving a red light would not return a blue or yellow light. A reflector collecting the cold from a mass of ice, would not throw off heat ; nor the contrary. *Nor* could the Moon, if a reflector, radiate or

throw down upon the Earth any other light than such as she receives from the Sun. No difference could exist in the quality or character of the light, and it could differ in no respect but the quantity or intensity.

The light of the Sun and of the Moon are different in their general appearance—in the colour and action upon the eye.

The Sun's light is drying and preservative, or antiseptic. The Moon's light is damp and putrefactive.

The Sun's rays will put out a common fire ; the Moon's light will increase the combustion. The light of the Sun falling upon certain chemical substances, produces a change of colour, as in photographic and other processes. The light of the Moon fails to produce the same effect. Dr. Lardner, at page 121 of his excellent work, "The Museum of Science," says—"The most striking instance of the effect of certain rays of solar light in blackening a light-colored substance, is afforded by chloride of silver, which is a white substance, but which immediately becomes black when acted upon by the rays near the violet extremity of the spectrum. This substance, however, highly susceptible as it is of having its colour affected by light, is, nevertheless, found not to be changed in any sensible degree when exposed to the light of the

Moon, even when that light is condensed by the most powerful burning lenses."

The Sun's light when concentrated by a number of mirrors, or a large burning lens, produces a focus which is entirely non-luminous, but in which the heat is so great that metallic and alkaline substances are quickly fused; earthy and mineral compounds almost immediately vitrified; and all animal and vegetable structures in a few seconds burned up and destroyed. But the Moon's light so concentrated produces a brilliant focus, so luminous that it is difficult to look upon it; and yet there is no increase of temperature! "If the most delicate thermometer be exposed to the full light of the Moon, shining with its greatest lustre, the mercury is not elevated a hair's breadth, neither would it be if exposed in the focus of her rays concentrated by the most powerful lenses. This has been proved by actual experiment." *

* * * The bulb of a thermometer sufficiently sensitive to render apparent a change of temperature amounting to the thousandth part of a degree, was placed in the focus of a concave reflector of vast dimensions, which, being directed to the Moon, the lunar rays were collected with great power upon it. Not the slightest change,

* "All the Year Round," by Dickens.

however, was produced in the thermometric column, proving that a concentration of rays sufficient to fuse gold, if they proceeded *from the Sun*, does not produce a change of temperature so great as the thousandth part of a degree, when they proceed *from the Moon*.*

“The light of the Moon though concentrated by the most powerful burning glass, is incapable of raising the temperature of the most delicate thermometer. M. De La Hire collected the rays of the full Moon when on the meridian, by means of a burning glass thirty-five inches in diameter, and made them fall on the bulb of a delicate air-thermometer. *No effect was produced*, though the lunar rays by this glass were concentrated 300 times.” “Professor Forbes concentrated the Moon’s light by a lens thirty inches in diameter, its focal distance being about forty-one inches, and having a power of concentration exceeding 6,000 times. The image of the Moon which was only eighteen hours past full, and less than two hours from the meridian, was brilliantly thrown by this lens on the extremity of a commodious thermo-pile. Although the observations were made in the most unexceptional manner, and (supposing that half the rays were reflected, dispersed, and absorbed) though the light of the Moon was concentrated

* Dr. Lardner’s Museum of Science, p. 115.

3000 times, not the slightest thermo-effect was produced! * In the "Lancet" (medical journal) for March 14th, 1856; particulars are given of several experiments, which proved that the Moon's rays when concentrated actually *reduced* the temperature upon a thermometer more than 8 degrees !

"The cold chaste Moon, the Queen
Of Heaven's bright Isles ;
Who makes all beautiful
On which she smiles :
That wandering shrine of soft
Yet icy flame,
Which ever is transformed
Yet still the same ;
And warms not but illumines."

—SHELLEY.

The "pale *cold* Moon" is an expression not only beautiful poetically but evidently true philosophically.

If, as we have now seen, the very nature of a reflector demands certain conditions and the Moon does not manifest these conditions, it must of necessity be concluded that the Moon is *not* a reflector, but a *self-luminous body*. If self-luminous her surface *could* not be darkened or eclipsed by a shadow of the Earth—supposing such were thrown upon it. The luminosity instead of being diminished would be greater in proportion to the greater density or

* Dr. Noad's Lectures on Chemistry, p. 334.

darkness of the shadow. As the light in a lantern shines most brightly in the darkest places, so would the Moon's self-luminous surface be most intense in the deepest part of the Earth's shadow. It is thus rendered undeniable that a Lunar Eclipse *does* not and *could* not arise from a shadow of the Earth ! As a *Solar* Eclipse occurs from the Moon passing over the Sun ; so from the evidence it is clear that a Lunar Eclipse *can only* arise from a similar cause—a body semi-transparent and well-defined passing before the Moon, or between her surface and the observer on the surface of the Earth. That such a body exists is admitted by several distinguished astronomers. In the report of the Council of the Royal Astronomical Society for June, 1850, it is stated, " We may well doubt whether that body which we call the Moon is the *only satellite* of the Earth." In the report of the Academy of Sciences for October 12, 1846, and again for August, 1847, the Director of one of the French Observatories gives a number of observations and calculations which have led him to conclude that " there is at least *one non-luminous body* of considerable magnitude which is attached as a *satellite to this Earth*."*

Persons who are unacquainted with the methods of calculating Eclipses and other

* Referred to in Lardner's " Museum of Science," p. 159.

astronomical phenomena, are prone to look upon the correctness of these calculations as powerful arguments in favour of the doctrine of the Earth's rotundity and the Newtonian philosophy generally. But this is erroneous. Whatever theory is adopted, or if all theories are discarded, the same results may follow, because the necessary data may be tabulated and employed independently of all theory, or may be mixed up with any, even the most opposite doctrines, or kept distinct from every system, just as the operator may decide. The tables of the Moon's relative positions for almost any second of time are purely practical, the result of long continued observation, and may or may not be mixed up with hypothesis. In Smith's "Rise and progress of Astronomy," speaking of Ptolemy, who lived in the 2nd century of the Christian Era, it is said, "The (considered) defects of his system did not prevent him from calculating all the Eclipses that were to happen for 600 years to come." Professor Partington, at page 370 of his Lectures on Natural Philosophy, says, "The most ancient observations of which we are in possession, that are sufficiently accurate to be employed in astronomical calculations, are those made at Babylon about 719 before the Christian Era, of three Eclipses of the Moon. Ptolemy, who has transmitted them to us,

employed them for determining the period of the Moon's mean motion ; and therefore had probably none more ancient on which he could depend. The Chaldeans, however, must have made a long series of observations before they could discover their "Saros" or lunar period of $6,585\frac{1}{3}$ days, or about 18 years ; at which time, as they had learnt, the place of the Moon, her *node* and *apogee* return nearly to the same situation with respect to the Earth and the Sun, and, of course, a series of nearly similar Eclipses occur."

Sir Richard Phillips, in his "Million of Facts," at page 388, says :—"The precision of astronomy arises, not from theories, but from prolonged observations, and the regularity of the motions, or the ascertained uniformity of their irregularities. Ephemerides of the planets' places, of Eclipses, &c., have been published for above 300 years, and were nearly as precise as at present."

"No particular theory is required to calculate Eclipses ; and the calculations may be made with equal accuracy *independent of every theory*."*

* Somerville's Physical Sciences, p. 46.

ACTRONAUTS

**STS 118, YOU CAN SEE ONE OF THE
FROGMAN USING A SCUBA DIVING TANK.**



The Neutral Buoyancy Laboratory (NBL) is an actronauts training facility and neutral buoyancy pool where they fake NASA and all space walks, located at the Sonny Carter Training Facility, near the Johnson fake Space Center in Houston, Texas.

SECTION 10.

CAUSE OF TIDES.

THE doctrine of the Earth's rotundity being fallacious, all ideas of "centre of attraction of gravitation," "mutual attraction of Earth and Moon," &c., &c., must be given up; and the cause of tides in the ocean must be sought for in another direction. It is certain that there is a constant pressure of the atmosphere upon the surface of the Earth and ocean. This is proved by ordinary barometrical observations, many Pneumatic experiments, and by the fact that during the most fearful storms at sea the surface only is disturbed; at the depth of a hundred feet the water is always calm—except in the path of well-marked currents and local submarine phenomena. The following quotations gathered from casual reading fully corroborate this statement. "It is amazing how superficial is the most terrible tempest. Divers assure us that in the greatest storms calm water is found at the depth of 90 feet."*

"This motion of the surface of the sea is not perceptible to a great depth. In the strongest

* Chambers's Journal, No. 100, p. 379.

gale it is supposed not to extend beyond 72 feet below the surface; and at the depth of 90 feet the sea is perfectly still.”*

“The people are under a great mistake who believe that the substance of the water moves to any considerable depth in a storm at sea. It is only the form or shadow which hurries along like a spirit, or like a thought over the countenance of the ‘great deep,’ at the rate of some forty miles an hour. Even when the ‘Flying Dutchman’ is abroad the great mass of water continues undisturbed and nearly motionless a few feet below the surface.”†

“The unabraded appearance of the shells brought up from great depths, and the almost total absence of the mixture of any *detritus* from the sea, or foreign matter, suggest most forcibly the idea of *perfect repose* at the bottom of the deep sea.”‡

Bearing this fact in mind, that there exists a continual pressure of the atmosphere upon the Earth, and associating it with the fact that the Earth is a vast plane “stretched out upon the waters,” and it will be seen that it must of necessity slightly fluctuate, or slowly rise and fall in the water. As by the action of the

* Penny Cyclopædia, Article Sea.

† London Saturday Journal, August 8, 1840, p. 71.

‡ Physical Geography of the Sea, by Lieut. Maury, p. 285.

atmosphere the Earth is slowly depressed, the water moves towards the receding shores and produces the flood tide ; and when by the reaction of the resisting oceanic medium the Earth gradually ascends the waters recede, and the ebb tide is produced. This is the *general* cause of tides. Whatever peculiarities are observable they may be traced to the reaction of channels, bays, headlands, and other local causes.

If a raft, or a ship, or any other structure floating upon water be carefully observed, it will be seen to have a gentle fluctuating motion. However calm the water and the atmosphere may be, this gradual rising and falling of the floating mass is always more or less observable. If vessels of different sizes are floating near each other they will be seen to fluctuate with different velocities, the largest and heaviest will move the least rapidly. This motion will be observable whether the vessels be held by their anchors, or moored to buoys, or freely floating in still water. A large and heavily laden vessel will make several fluctuations in a minute of time ; the Earth once only in about twelve hours, because it is proportionately larger.

To this simple condition of the Earth,—the action or pressure upon it of the atmosphere, and the reaction or resistance to it of the water, *may be traced* all the leading peculiarities of the

tides. The simultaneous ebb and flow upon meridians 180° apart. The absence of high and low water in large inland seas and lakes ; which being contained within and fluctuating with the Earth cannot therefore show a relative change in the altitude of the surface. The flux and reflux observed in several inland wells and basins though far from the sea, but being connected with it by subterranean passages, necessarily show a relative difference in the surface levels of the earth and water. And the regular ebb and flood of the water in the great Polar sea recently discovered by Dr. Kane, although it is separated from the great tidal current of the Atlantic Ocean by deep barriers of ice—as will be seen by the following quotation :—“ Dr. Kane reported an open sea north of the parallel of 82° . To reach it his party crossed a barrier of ice 80 or 100 miles broad. Before gaining this open water he found the thermometer to show the extreme temperature of -60° . Passing this ice-bound region by travelling North, he stood on the shores of an iceless sea extending in an unbroken sheet of water as far as the eye could reach towards the pole. Its waves were dashing on the beach with the swell of a boundless ocean. The tides ebbed and flowed in it, and I apprehend that the tidal wave from the Atlantic can no more pass under this icy barrier to be propa-

gated in seas beyond than the vibrations of a musical string can pass with its notes a 'fret' upon which the musician has placed his finger.

* * * These tides therefore must have been born in that cold sea, having their cradle about the North Pole ; and we infer that most, if not all, the unexplored regions about the Pole are covered with deep water ; for, were this unexpected area mostly land, or shallow water, it could not give birth to regular tides."*

That the Earth has a vibratory or tremulous motion, such as must necessarily belong to a floating and fluctuating structure, is abundantly proved by the experience of astronomers and surveyors. If a delicate spirit-level be firmly placed upon a rock or upon the most solid foundation which it is possible to construct, the very curious phenomenon will be observed of constant change in the position of the air-bubble. However carefully the "level" may be adjusted, and the instrument protected from the atmosphere, the "bubble" will not maintain its position many seconds together. A somewhat similar influence has been noticed in astronomical observatories, where instruments of the best construction and placed in the most approved positions cannot always be relied upon without occasional re-adjustment.

* *Physical Geography of the Sea*, by Lieut. Maury, p. 176.

SECTION 11.

CONSTITUTION, CONDITION, AND ULTIMATE DESTRUCTION OF THE EARTH BY FIRE.

CHEMICAL analysis proves to us the important fact that the great bulk of the Earth—meaning thereby the *land* as distinct from the waters—is composed of metallic oxides or metals in combination with oxygen. When means are adopted to remove the oxygen it is found that most of these metallic bases are highly combustible. The different degrees of affinity existing among the elements of the Earth, give rise to all the rocks, minerals, ores, deposits, and strata which constitute the material habitable world. The different specific gravities or relative densities which these substances are found to possess, and the numerous evidences which exist of their former plastic or semi-fluid condition, afford positive proof that from a once commingled or chaotic state regular but rapid precipitation, stratification, crystallization, and concretion suc-

cessively occurred ; and that in some way not yet clear to us sufficient chemical action was produced to ignite a great portion of the Earth, and to reduce it to a molten incandescent state, the volatile products of which being forcibly eliminated have broken up the stratified formations, and produced the irregular confused condition which we now observe. That such an incandescent molten state of a great portion of the lower parts of the Earth still exists is a matter of certainty ; and there is evidence that the heat thus internally generated is gradually increasing.

“The uppermost strata of the soil share in all the variations of temperature which depend upon the seasons ; and this influence is exerted to a depth which, although it varies with the latitude, is never very great. Beyond this point the temperature rises in proportion as we descend to greater depths, and it has been shown, by numerous and often-repeated experiments, that the increase of temperature is on average one degree (Fahrenheit) for about every 545 feet. Hence it results that at a depth of about twelve miles from the surface, we should be on the verge of an incandescent mass.”*

“So great is the heat within the Earth, that in Switzerland, and other countries where the springs of water are very deep, they bring to the

* *Rambles of a Naturalist*, by M. de Quatrefages.

surface the warm mineral waters so much used for baths and medicine for the sick ; and it is said, that if you were to dig very deep down into the Earth, the temperature would increase at the rate of one degree of the thermometer for every 100 feet ; so that, at the depth of 7000 feet, or one mile and a half, all the water that you found would be boiling ; and at the depth of about ten miles all the rocks would be melted. * * *

A day will yet come when this earth will be burned up by the fire. There is fire, as you have heard, within it, ready to burst forth at any moment.* “This earth, although covered all round with a solid crust, is all on fire within. Its interior is supposed to be a burning mass of melted, glowing metals, fiery gas, and boiling lava. * * * * * The solid crust which covers this inward fire is supposed not to be much more than from 9 to 12 miles in thickness. Whenever this crust breaks open, or is cleft in any place, there rush out lava, fire, melted rocks, fiery gases, and ashes, sometimes in such floods as to bury whole cities. From time to time we read of the earth quaking, trembling, and sometimes opening, and of mountains and small islands (which are mountains in the sea)

* “The World’s Birthday,” by Professor Gaussen, Geneva, p. 43.

being thrown up in a day.”*

In a periodical called “Recreative Science,” at the end of an interesting article on volcanoes, &c., the following sentence occurs:—
 “The conclusion is therefore inevitable, that the general distribution all over the earth of volcanic vents, their similarity of action and products, their enormous power and seeming inexhaustibility, their extensiveness of action in their respective sites, the continuance of their energies during countless years, and the incessant burning day and night, from year to year, of such craters as Stromboli; and lastly, the apparent inefficiency of external circumstances in controlling their operations, eruptions happening beneath the sea as beneath the land, in the frigid as in the torrid zone, for these and many less striking phenomena, we must seek for some great and general cause, such only as the central heat of the earth affords us.”

Sir Richard Phillips says, “at the depth of 50 feet (from the sea level) the temperature of the earth is the same winter and summer.” * * *
 “The deepest coal mine in England is at Killingworth, near Newcastle-upon-Tyne, and the mean annual temperature at 400 yards below the surface is 77°; and at 300 yards, 70°; while

* “The World’s Birthday,” by Professor Gaussen, Geneva, p. 42.

at the surface it is but 48° , being about one degree of increase for every 15 yards. Hence, at 3,300 yards, the heat would be equal to boiling water, taking 20 yards to a degree. This explains the origin of hot springs. The heat of the Bath waters is 116° , hence they would appear to rise from a depth of 1,320 yards. By experiments made at the Observatory of Paris for ascertaining the increase of temperature from the surface of the earth towards the interior, 51 feet, or 17 yards, corresponds to the increase of one degree Fahrenheit's thermometer. Hence, the temperature of boiling water would be at 8,212 feet, or about $1\frac{1}{2}$ English miles under Paris."

Professor Silliman, of America, states "that in boring the Artesian wells in Paris, the temperature increased at the rate of 1 degree for every 50 feet downwards ; and, reasoning from causes known to exist, the whole of the interior part of the earth, or, at least, a great part of it, is an ocean of melted rock agitated by violent winds."

Sir Charles Lyell, in his address to the British Association, assembled at Bath, September, 1864, speaking of hot springs generally, said "An increase of heat is always experienced as we descend into the interior of the earth. * * *

The estimate deduced by Mr. Hopkins, from an accurate series of observations made in the

Monkwearmouth shaft, near Durham, and in the Dukenfield shaft, near Manchester, each of them 2,000 feet in depth. In these shafts the temperature was found to rise at the rate of 1° Fah. for every increase of depth of from 65 to 70 feet."

"The observations made by M. Arago, in 1821, that the deepest Artesian wells are the warmest, threw great light on the origin of thermal springs, and on the establishment of the law, that terrestrial heat increases with increasing depth. It is a remarkable fact, which has but recently been noticed, that at the close of the third century St. Patricius, probably Bishop of Partusa, was led to adopt very correct views regarding the phenomenon of the hot springs at Carthage. On being asked what was the cause of boiling water bursting from the earth, he replied, 'Fire is nourished in the clouds, and in the interior of the earth, as Etna and other mountains near Naples may teach you. The subterranean waters rise as if through siphons. The cause of hot springs is this: waters which are more remote from the subterranean fire are colder, whilst those which rise nearer the fire, are heated by it, and bring with them to the surface which we inhabit, an insupportable degree of heat.'"*

* "Humboldt's Cosmos," p. 220.

The investigations which have been made, and the evidence which has been brought together, render it undeniable that the lower parts of the earth are on fire. Of the intensity of the combustion, no practical idea can be formed. It is fearful beyond comparison. The lava thrown out from a volcano in Mexico, "was so hot that it continued to smoke for twenty years ; and after three years and a half, a piece of wood took fire in it, at a distance of five miles from the crater." In various parts of the world, large islands have been thrown up from the sea, in a red-hot glowing condition, and so intensely heated, that after being forced through many fathoms of salt water, and standing in the midst of it, exposed to wind and rain for several months, they were not sufficiently cooled for persons to approach and stand upon them. "A notable fact is the force exerted in volcanic action, Cotopaxi, in 1738, threw its fiery rockets 3,000 feet above its crater, while in 1744 the blazing mass, struggling for an outlet, roared like a furnace, so that its awful voice was heard at a distance of more than six hundred miles. In 1797, the crater of Tunguragua, one of the great peaks of the Andes, flung out torrents of mud, which dammed up rivers, opened new lakes, and in valleys of a thousand feet wide made deposits six hundred feet deep. The

stream from Vesuvius which, in 1737, passed through Torre del Greco, contained thirty-three million cubic feet of solid matter ; and, in 1794, when Torre del Greco was destroyed a second time, the mass of lava amounted to forty-five million cubic feet. In 1669 Etna poured forth a flood which covered 84 square miles of surface, and measured nearly 100,000,000 cubic feet. On this occasion the sand and scorix formed the Monte Rossi, near Nicolosi, a cone two miles in circumference, and four hundred and fifty feet high. The stream thrown out by Etna, in 1819, was in motion, at the rate of a yard per day, for nine months after the eruption ; and it is on record that the lavas of the same mountain, after a terrible eruption, were not thoroughly cooled and consolidated ten years after the event. In the eruption of Vesuvius, A.D. 79, the scorix and ashes vomited forth far exceeded the entire bulk of the mountain ; while, in 1660, Etna disgorged more than twenty times its own mass.

* * * Vesuvius has thrown its ashes as far as Constantinople, Syria, and Egypt ; it hurled stones eight pounds in weight to Pompeii, a distance of six miles ; while similar masses were tossed up 2,000 feet above its summit. Cotopaxi has projected a block one hundred cubic yards in volume a distance of nine miles, while *Sum-bawa*, in 1815, during the most terrible eruption

on record, sent its ashes as far as Java, a distance of three hundred miles. * * * In viewing these evidences of enormous power, we are forcibly struck with the similarity of action with which they have been associated ; and, carrying our investigation a step further, the same similarity of the producing power is hinted at in the identity of the materials ejected. Thus, if we classify the characteristics of all recorded eruptions, we shall find that the phenomena are all reducible to upheavals of the earth, rumblings and explosions, ejections of carbonic acid, fiery torrents of lava, cinders, and mud, with accompanying thunder and lightning. The last-named phenomena are extrajudicial in character ; they are merely the result of the atmospheric disturbance consequent on the escape of great heat from the earth, just as the burning of an American forest causes thunder and rain. The connection that apparently exists, too, between neighbouring craters is strongly confirmed by the fact that in every distinct volcanic locus but *one* crater is usually active at a time. Since Vesuvius has resumed his activity, the numerous volcanic vents on the other side of the bay have sunk into comparative inactivity ; for ancient writers, who are silent respecting the former, speak of the mephitic vapours of the Lake Avernus as destructive to animal existence, and

in earlier days than these Homer pictures the Phlegrean Fields as the entrance to the infernal regions, placed at the limits of the habitable world, unenlightened by rising or setting sun, and enveloped in eternal gloom. * * * * The earth contains within it a mass of heated material ; nay, it is a heated and incandescent body, habitable only because surrounded with a cool crust—the crust being to it a mere shell, within which the vast internal fires are securely inclosed : and yet not securely, perhaps, unless such vents existed as those to which we apply the term volcano. * * * * Every volcano is a safety-valve, ready to relieve the pressure from within when that pressure rises to a certain degree of intensity ; or permanently serving for the escape of conflagrations, which, if not so provided with escape, might rend the habitable crust to pieces.”*

Thus it is certain, from the phenomena of earthquakes, submarine and inland volcanoes which exist in every part of the earth from the frozen to the tropical regions, hot and boiling springs, fountains of mud and steam, lakes of burning sulphur, jets and blasts of destructive gases, and the choke and fire damps of our coal mines, that at a few miles only below the surface of the earth there exists a vast region of com-

* *Recreative Science*, p.p. 257 to 260.

bustion, the intensity and power of which are indescribable, and cannot be compared with anything within the range of human experience.

As the earth is an extended plane resting in and upon the waters of the "great deep" it may fitly be compared to a large vessel or ship floating at anchor, with her "Hold" or lower compartments beneath the water-line filled with burning materials ; and, from our knowledge of the nature and action of fire, it is difficult to understand in what way the combustion can be prevented from extending, when it is known to be surrounded with highly inflammable substances. Wherever a fire is surrounded with heterogeneous materials—some highly combustible and others partially and indirectly combustible—it is not possible for it to remain continually in the same condition nor to diminish in extent and intensity, it must increase and extend itself. That the fire in the earth is so surrounded with inflammable materials is matter of certainty ; the millions of tons of coals, peat, turf, mineral oils, rock tar, pitch, asphalte, bitumen, petroleum, mineral naphtha, and numerous other hydro-carbons which exist in various parts of the earth, and much of these far down below the surface, prove this condition to exist. The products of volcanic action being chiefly carbon in combination with hydrogen

and oxygen, prove also that these carbon compounds already exist in a state of combustion, and that as such immense quantities of the same fuel still exist, it is quite within the range of possibility that some of the lower strata of combustible matter may take fire and the action rapidly extend itself through the various and innumerable veins which ramify in every direction throughout the whole earth. Should such an action commence, knowing, as we do, that the rocks and minerals of the earth are but oxides of inflammable bases, and that the affinities of these bases are greatly weakened and almost suspended in the presence of highly heated carbon, we see clearly that such chemical action or fire would quickly extend and increase in intensity until the whole earth with everything entering into its composition, would rapidly decompose, volatilise, and burst into one vast indescribable, annihilating conflagration !

Walmart 

Coexist

11 men started scottish rite in charleston, sc, 11 is one more than Gods 10, satanism. 11 Jews all over communism etc. 9-11, 3-11, 11-11 etc etc 11, 22, 33, 44, 55, 66, 77, 88, 99



Bank of America

 =  = 33° Freemasonry

BLUE LODGE MASONS 1-3, outer court
RED LODGE MASONS 4+ also hidden higher level ones from dupe masons. 13=Royal Arch 18=Rosicrucian etc
Blue pill or Red Pill?
Red/White/Blue Masonic colors Satanic Judaeo-Masonic French Revolution




Red Star of Rempham/Moloch-See
Acts Ch 7:43, ancient star of the Jews. Communism.




5 Rothschild=Red Shield, 5 Rothschild sons/Bankhouses




TALISMAN OF SATURN


Obverse


Reverse

G=7, generation aka sex force worship, Kunalinga, serpent power/sex magic etc "nuthin but a "G" thing. Gatorade...

M=13, Mirrored, MM=33 on its side, M&M's, GM, etc



Black magic Hexagram of pagan kabbalism from Babylon/India/Egypt, Hermeticism.



As above so below, 666 encoded. Gnostics star.






District of, British-
Columbia
Sportswear Company







6 POINTS 6 MINI TRIANGLES 6 SIDED POLYGON



 =  = 

also rainbow colors mocks symbol for God from OT. This is deliberate. Also Josephs coat mocking as well.

knowledge of good and evil

 =  = 666

SECTION 12.

MISCELLANEA.

MOON'S PHASES.—It has been shown that the Moon is not a reflector of the Sun's light, but is self-luminous. That the luminosity is confined to one-half its surface is sufficiently shown by the fact that at "New Moon" the whole circle or outline of the Moon is often distinctly visible; but the darker outline is less, or the circle is smaller than the segment which is illuminated. From this it is easily seen that "New Moon," "Full Moon," and "Gibbous Moon" are but the different proportions of the illuminated surface which are presented to the observer on earth.

MOON'S APPEARANCE.—Astronomers have indulged their imagination to such a degree that the Moon has been considered to be a solid, opaque, spherical world, having mountains, valleys, lakes, volcanic craters, and other conditions analogous to the surface of the earth. So far has this fancy been carried, that the whole visible disc has been mapped out, and special names given to its various peculiarities, as

though they had been carefully observed and measured by a party of terrestrial ordnance surveyors. All this has been done in direct opposition to the fact that whoever looks, without previous bias, through a powerful telescope at the Moon's surface, will be puzzled to say what it is really like, or how to compare it with anything known. The comparison which may be made, will depend greatly upon the state of mind of the observer. It is well known that persons looking at the rough bark of a tree, or at the irregular lines or veins in certain kinds of marble and stone, or gazing at the red embers in a dull fire, will, according to the degree of activity of the imagination, be able to see different forms, even the outlines of animals and human faces. It is in this way that persons may fancy that the Moon's surface is broken up into hills and valleys and other arrangements such as are found on earth. But that anything really similar to the surface of our own world is anywhere visible upon the Moon is altogether fallacious. This is admitted by some of those who have written upon the subject. "Some persons when they look into a telescope for the first time, having heard that mountains are to be seen, and discovering nothing but these (previously *described*) unmeaning figures, break off in

disappointment, and have their faith in these things rather diminished than increased. I would advise, therefore, before the student takes even his *first view* of the Moon through a telescope, to form as clear an idea as he can how mountains, and valleys, and caverns situated at such a distance *ought* to look, and by what marks they may be recognised. Let him seize, if possible, the most favourable periods (about the time of the first quarter), and previously *learn from drawings* and explanations how to *interpret* everything he sees."* "Whenever we exhibit celestial objects to inexperienced observers it is usual to precede the view with good *drawings* of the objects, accompanied by an explanation of what each appearance exhibited in the telescope *indicates*. The novice is told that mountains and valleys can be seen in the Moon by the aid of the telescope ; but on looking he sees a confused mass of light and shade, and *nothing* which *looks* to him *like either mountains or valleys* ! Had his attention been previously directed to a plain *drawing* of the Moon, and each particular appearance *interpreted* to him, he would then have looked through the telescope with intelligence and satisfaction !"† Thus it is

* "Mechanism of the Heavens," by Denison Olmsted, LL.D., Professor of Natural Philosophy and Astronomy in Gale College, U.S.

† Mitchell's "Orbs of Heaven," p. 232.

admitted by those who teach that the Moon is a spherical world, having hills and dales like the earth, can only see such things in imagination. "Nothing but unmeaning figures" are really visible, and "the students break off in disappointment, and have their faith in such things rather diminished than increased," "until they previously learn from *drawings* and explanations how to *interpret* everything seen." But who *first made* the drawings? Who *first interpreted* the "unmeaning figures" and the "confused mass of light and shade?" Who first declared them to indicate mountains and valleys, and ventured to make drawings and give explanations and interpretations for the purpose of biasing the minds, and fixing or guiding the imaginations of subsequent observers? Whoever they were, they at least had "given the reins to Fancy," and afterwards took upon themselves to dogmatise and teach their crude and unwarranted imaginings to succeeding investigators. And this is the kind of evidence and "reasoning" which is obtruded in our seats of learning, and spread out in the numerous works which are published for the edification of society!

THE PLANET NEPTUNE.—For some years the advocates of the earth's rotundity, and of the Newtonian philosophy generally, were accustomed to refer with an air of pride and triumph

to the discovery of a new planet, which was called Neptune, as an undeniable evidence of the truth of their system or theory. The existence of this luminary was said to have been predicated from calculation only, and for a considerable period before it had been seen by the telescope. It was urged that therefore the system which would permit of such a discovery must be true. But the whole matter subsequently proved to be unsatisfactory. That a proper conception may be formed of the actual value of the calculations and their supposed verification, the following account will be useful. "In the year 1781, on March 13, Uranus was discovered by Sir William Herschel, who was examining some small stars near the feet of Gemini; and he observed one of them to have a sensible amount of diameter and less brightness than the others, and it was soon found to be a planet. It, however, had been seen before—first, by Flamsteed, on December 23rd, 1690; and between this time and 1781 it had been observed 16 times by Flamsteed, Bradley, Mayer, and Lemonnier; these astronomers had classed it as a star of the sixth magnitude. Between 1781 and 1820 it was of course very frequently observed; and it was hoped that at the latter time sufficient data existed to construct accurate tables of its motions. This task was undertaken

by M. Bouvard, Member *de L'Academie des Sciences*, but he met with unforeseen difficulties. It was found utterly impossible to construct tables which would represent the 17 ancient observations, and at the same time the more numerous modern ones; and it was finally concluded that the ancient observations were erroneous, or that some strange and unknown action disturbed, or had disturbed, the planet; consequently M. Bouvard discarded entirely the old observations, and used only those taken between 1781 and 1820, in constructing the tables of Uranus. For some years past it has been found that the tables thus constructed do not agree any better with modern observations, than they do with the ancient observations; *consequently it was evident that the planet was under the influence of some unknown cause.* Several hypotheses have been suggested as to the nature of this cause; some persons talked of a resisting medium; others of a great satellite which might accompany Uranus; some even went so far as to suppose that the vast distance Uranus is from the Sun caused the law of gravitation to lose some of its force; others thought that the rapid flight of a comet had disturbed its regular movements; others thought of the existence of a planet beyond Uranus, whose disturbing force caused the anomalous

motions of the planet ; but no one did otherwise than follow the bent of his inclination, and did not support his assertion by any positive considerations.

“ Thus was the theory of Uranus surrounded with difficulties, when M. Le Verrier, an eminent French mathematician, undertook to investigate the irregularities in its motions. His first paper appeared on the 10th November, 1845, and his second on June 1, 1846 (published in the *Comptes Rendûs*). In this second paper, after a most elaborate and careful investigation, he proves the utter incompatibility of any of the preceding hypotheses to account for the planet’s motions, except only that of the last one, viz., that of a new planet. He then successively proves that this planet cannot be situated either between the Sun and Saturn, or between Saturn and Uranus ; but that it must be beyond Uranus. And in this paper he asks the following questions :—‘ Is it possible that the irregularities of Uranus can be owing to the action of a planet situated in the ecliptic, at a distance of twice the mean distance of Uranus from the Sun ? If so, where is it actually situated ? What is its mass ? What are the elements of the orbit it describes ? ’ ”

This was the problem he set himself to work upon, by the means of solving the inverse problem of the perturbations ; for instead of

having to measure the action of a determined planet, he had to deduce the elements of the orbit of the disturbing planet, and its place in the heavens from the recognised inequalities of Uranus. And this problem M. Le Verrier has successfully solved. In his second paper he deduces the place in the heavens that the body must be as 325° of helio-centric longitude. On the 31st August last he published his third paper. In this he has calculated that the period of the planet is 217 years ; and that it moves in an orbit at the distance of more than 3,000 millions of miles from the Sun ; that its mean longitude on January 1st, 1847, will be $318^\circ 17'$; its true longitude $326^\circ 32'$; and that the longitude of its perihelion will be $284^\circ 45'$; that it will appear to have a diameter of $3\frac{1}{4}$ seconds of arc as seen from the earth ; and that it is now about 5° E. of *Delta Capricorni*.

“These remarkable calculations have pointed out a position which has very nearly proved to be the true one.

“On September 23, Dr. Galle at Berlin discovered a star of the eighth magnitude, which has proved to be the planet. Its place at the time was five degrees from *Delta Capricorni*. It was found to have a disc of 3 seconds as predicted ; and its longitude at the time differs less than a degree from the longitude computed

from the above elements. Its daily motion, too, is found to agree very closely with the predicted ; and, judging from this last circumstance, the planet's distance, as stated above, must be nearly the truth.

“ Thus the result of these calculations was the discovery of a new planet in the place assigned to it by theory, whose mass, distance, position in the heavens, and orbit it describes round the Sun, were all approximately determined before the planet had ever been seen ; and all agrees with observations, so far as can at present be determined. It is found to have a disc, and its diameter cannot be much less than 40,000 miles, and may be more ; its motions are very slow ; it is at present in the constellation of Aquarius as indicated by theory ; and it will be in the constellation of Capricornus all the year 1847. It may be readily seen in a telescope of moderate power.

“ Whatever view we take of this noble discovery it is most gratifying, whether at the addition of another planet to our list ; whether at the proving the correctness of the theory of universal gravitation ; or in what view soever, it must be considered as a splendid discovery, and the merit is chiefly due to theoretical astronomy. This discovery is perhaps the greatest triumph

of astronomical science that has ever been recorded.”*

If such things as criticism, experience, and comparative observation did not exist, the tone of exultation in which the above article indulges might be properly shared in by the astronomical student ; but let the following extracts be carefully read, and it will be seen that such a tone was premature and unwarranted. “Paris, Sept. 15, 1848. The only sittings of the Academy of late in which there was anything worth recording, and even this was not of a practical character, were those of the 29th ult. and the 11th inst. On the former day M. Babinet made a communication respecting the planet Neptune, which has been generally called M. Le Verrier’s planet, the discovery of it having, as it was said, been made by him from theoretical deductions, which astonished and delighted the scientific public. What M. Le Verrier had inferred from the action on other planets of some body which ought to exist was verified, at least so it was thought at the time, by actual vision. Neptune was actually seen by other astronomers, and the honour of the theorist obtained additional lustre. But it appears from a communication of M. Babinet that *this is not the planet* of M. Le Verrier. He had placed his planet at a distance

* “*Illustrated London Almanack for 1847.*”

from the Sun equal to thirty-six times the limit of the terrestrial orbit ; Neptune revolves at a distance equal to thirty times of these limits, which makes a difference of nearly *two hundred millions of leagues* ! M. Le Verrier had assigned to his planet a body equal to thirty-eight times that of the earth ; Neptune has only *one-third* of this volume M. Le Verrier had stated the revolutions of his planet round the Sun to take place in two hundred and seventeen years ; Neptune performs its revolutions in one hundred and sixty-six years ! Thus then Neptune is, not M. Le Verrier's planet ; and all his theory as regards that planet falls to the ground ! M. Le Verrier may find another planet, but it will not answer the calculations which he had made for Neptune. In the sitting of the 14th, M. Le Verrier noticed the communication of M. Babinet, and to a great extent admitted his own error ! He complained indeed that much of what he said was taken in too absolute a sense ; but he evinces much more candour than might have been expected from a disappointed explorer. M. Le Verrier may console himself with the reflection that if he has not been so successful as he thought he had been, others might have been equally unsuccessful, and as he has still before him an immense field for the exercise of observation and calculation, we

may hope that he will soon make some discovery which will remove the vexation of his present disappointment.”*

“As the data of Le Verrier and Adams stand at present there is a discrepancy between the predicted and the true distance; and in some other elements of the planet. It remains, therefore, for these or future astronomers to reconcile theory with fact; or, perhaps, as in the case of Uranus, to make the new planet the means of leading to yet greater discoveries. It would appear, from the most recent observations, that the mass of Neptune, instead of being as at first stated one nine thousand three hundredth is only one twenty three thousandth that of the Sun; whilst its periodic time is now given with a greater probability at 166 years; and its mean distance from the Sun nearly thirty. Le Verrier gave the mean distance from the Sun thirty-six times that of the Earth; and the period of revolution 217 years.”*

“May 14, 1847. A Paper was read before the Royal Astronomical Society, by Professor Schumacher, ‘on the identity of the planet Neptune (M. le Verrier’s) with a star observed by M. Lalande in May, 1795.’”†

* “Times” Newspaper, Monday, Sept. 18, 1848.

* “Cosmos,” by Humboldt, p. 75.

† “Report of Royal Astronomical Society,” for Feb. 11, 1848, No. 4, vol. 8.

Such mistakes as the above ought at least to make the advocates of the Newtonian theory less positive, and more ready to acknowledge that at best their system is but hypothetical and must sooner or later give place to a philosophy the premises of which are demonstrable, and which is in all its details sequent and consistent.

PENDULUM EXPERIMENTS AS PROOFS OF EARTH'S MOTION.

IN the early part of the year 1851, the scientific journals and nearly all the newspapers published in Great Britain and on the Continents of Europe and America were occupied in recording and discussing certain experiments with the pendulum, first made by M. Foucault, of Paris ; and the public were startled by the announcement that the results furnished a practical proof of the Earth's rotation.

The subject was referred to in the *Literary Gazette*, in the following words :—"Everybody knows what is meant by a pendulum in its simplest form, a weight hanging by a thread to a fixed point. Such was the pendulum experimented upon long ago by Galileo, who discovered the well-known law of isochronous vibrations, applicable to the same. The subject has since

received a thorough examination, as well theoretical as practical, from mathematicians and mechanics ; and yet, strange to say, the most remarkable feature of the phenomenon has remained unobserved and wholly unsuspected until within the last few weeks, when a young and promising French physicist, M. Foucault, who was induced by certain reflections to repeat Galileo's experiments in the cellar of his mother's house at Paris, succeeded in establishing the existence of a fact connected with it which gives an immediate and visible demonstration of the Earth's rotation. Suppose the pendulum already described to be set moving in a vertical plane from north to south, the plane in which it vibrates, to ordinary observation, would appear to be stationary. M. Foucault, however, has succeeded in showing that this is not the case, but that the plane is itself slowly moving round the fixed point as a centre in a direction contrary to the Earth's rotation, *i.e.*, with the apparent heavens, from east to west. His experiments have since been repeated in the hall of the observatory, under the superintendence of M. Arago, and fully confirmed. If a pointer be attached to the weight of a pendulum suspended by a long and fine wire, capable of turning round in all directions, and nearly in contact with the floor of a room, the line which this

pointer appears to trace on the ground, and which may easily be followed by a chalk mark, will be found to be slowly, but visibly, and constantly moving round, like the hand of a watch dial ; and the least consideration will show that this ought to be the case, and will excite astonishment that so simple a consequence as this is, of the most elementary laws of Geometry and Mechanics, should so long have remained unobserved. * * * The subject has created a great sensation in the mathematical and physical circles of Paris. It is proposed to obtain permission from the Government to carry on further observations by means of a pendulum suspended from the dome of the Pantheon, length of suspension being a desideratum in order to make the result visible on a larger scale, and secure greater constancy and duration in the experiment. The time required for the performance of a complete revolution of the plane of vibration would be about 32 hours 8 minutes for the parallel of Paris ; 30 hours 40 minutes for that of London ; and at 30 degrees from the equator exactly 48 hours. Certainly any one who should have proposed not many weeks back to prove the rotation of the Earth upon which we stand by means of direct experiment made upon its surface would have run the risk, with the mob of gentlemen who write upon mechanics, of being

thought as mad as if he were to have proposed reviving Bishop Wilkins's notable plan for going to the North American colonies in a few hours, by rising in a balloon from the Earth and gently floating in the air until the Earth, in its diurnal rotation, have turned the desired quarter towards the suspended æronaut, whereupon as gently to descend ; so necessary and wholesome is it occasionally to reconsider the apparently simplest and best established conclusions of science."

The following is from the *Scotsman*, which has always been distinguished for the accuracy of its scientific papers. The article bears the initials "C. M.," which will at once be recognised as those of Mr. Charles Maclaren, for many years the accomplished editor of that journal :—" The beautiful experiment contrived by M. Foucault to demonstrate the rotation of the globe, has deservedly excited universal interest. * * * A desire has always been felt that some method could be devised of rendering this rotation palpable to the senses. Even the illustrious Laplace participated in this feeling and has left it on record. 'Although,' he says, 'the rotation of the Earth is now established with all the certainty which the physical sciences require, still a direct proof of that phenomenon ought to interest both geometers and astronomers.' No man ever knew the laws of the planetary

motions better than Laplace, and before penning such a sentence, it is probable that he had turned the subject in his mind, and without discovering any process by which the object could be attained ; but it does not follow that if he had applied the whole force of his genius to the task, he would not have succeeded. Be this as it may, here we have the problem solved by a man not probably possessing a tithe of his science or talent ; and, what is very remarkable, after the discovery was made, it was found to be legitimately deducible from mathematical principles. * * * In this, as in many other cases, the *fact* comes first, and takes us by surprise ; after which we find that we had long been in possession of the principles from which it flowed, and that, with the clue we had in our hands, theory should have revealed the fact to us long before. M. Foucault's communication describing his experiments is in the *Comptes Rendus* of the Academy of Sciences, for 3rd February, 1851. His first experiments were made with a pendulum only two metres (6ft. 6½in.) in length, consisting of a steel wire from 6-10ths to 11-10ths of a millimetre in diameter (the millimetre is the 25th part of an inch) ; to the lower end of which was attached a polished brass ball, weighing 5 kilogrammes, or 11 English pounds. * * * A metallic

point projecting below the ball, and so directed as if it formed a continuation of the suspension wire, served as an index to mark the change of position more precisely. The pendulum hung from a steel plate in such a manner as to move freely in any vertical plane. To start the oscillatory movement without giving the ball any bias, it was drawn to one side with a cord, which held the ball by a loop; the cord was then burned, after which the loop fell off, and the vibrations (generally limited to an arc of 15 or 20 degrees) commenced. In one minute the ball had sensibly deviated from the original plane of vibration towards the observer's left. Afterwards he experimented at the Observatory with a pendulum 11 metres (30 feet) long, and latterly at the Pantheon with one still longer. The advantage of a large pendulum, as compared with a small one, is, that a longer time elapses before it comes to a state of rest; for machinery cannot be employed here, as in a clock, to continue the motion. The pendulum is suspended over the centre of a circular table, whose circumference is divided into degrees and minutes. The vibrations are begun in the manner above described, and in a short time it is observed that the pendulum, instead of returning to the same point of the circle from *which* it started, has shifted to the left. If

The Perestroika Deception

--COMMUNISM, started by crypto-jews marx and engels, worked and realized by crypto-jews lenin, trotsky, stalin, khrushchev and many many more.

--Central Banksterism/Monopoly Megacorps: Wholly jewish and crypto jewish inventions and empires. Debt slavery on a national and now international basis.

Problem-reaction-Solution, dialectical materialism, Kabbalism, Talmudism. Armies of hidden crypto-jews like roosevelt, truman, eisenhower and many others.

**Problem: Central
Banksterism/Megacorps/MEGA Rich
Reaction: Communism**

**Solution: Managed redistribution of wealth, no
private property, everyone is a slave, except
the jewish elite and the jewish middle class.
WORLD NOAHIDE EMPIRE.**

The world's slide towards
THE 'SECOND OCTOBER REVOLUTION'
['WELTOKTOBER']

Anatoliy Golitsyn

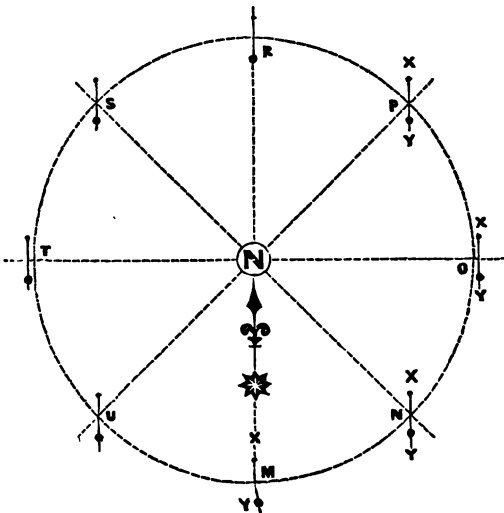
Author of 'New Lies For Old'

narrowly observed, the change in the plane of vibration (says M. Foucault) is perceptible in one minute, and in half an hour, "*Ille sante aux yeux*," it is quite palpable. At Paris the change exceeds 11 degrees in an hour. Thus, supposing the oscillations to commence in a plane directed south and north, in two hours the oscillations will point SSW. and NNE.; in four hours they will point SW. and NE.; and in eight hours the oscillations will point due east and west, or at right angles to their original direction. To a spectator the change seems to be in the pendulum, which, without any visible cause, has shifted round a quarter of a circle; but the real change is in the table, which, resting on the Earth, and accompanying it in its rotation, has performed a fourth (and something more) of its diurnal revolution.

No one anticipated such a result; and the experiment has been received by some with incredulity, by all with wonderment; and one source of the incredulity arises from the difficulty of conceiving how, amidst the ten thousand experiments of which the pendulum has been the subject, so remarkable a fact could have escaped notice so long. Fully admitting that these experiments have generally been conducted with pendulums which had little freedom of motion horizontally, we still think it odd that

somebody did not stumble upon the curious fact.

Though all the parts of the Earth complete their revolution in the same space of time, it is found that the rate of horizontal motion in Foucault's pendulum varies with the latitude of the place where the experiment is made. At the pole, the pendulum would pass over 15 degrees in an hour, like the Earth itself, and complete its circuit in 24 hours. At Edinburgh, the pendulum would pass over $12\frac{1}{2}$ degrees in an hour, and would complete its revolution in 29 hours 7 minutes. At Paris, the rate of motion is 11 degrees and 20 minutes per hour, and the revolution should be completed in 32 hours.



Let the above figure represent a portion of the Earth's surface near the north pole N . Suppose the pendulum to be set in motion at m , so as to vibrate in the direction $x y$, which coincides with that of the meridian $m N$ or $m r$. The Earth in the meantime is pursuing its easterly course, and the meridian line $m N$ has come in six hours into the position $n N$. It has been hitherto supposed that the pendulum would now vibrate in the new direction $n N$, assumed by the meridian, but thanks to M. Foucault, we now know that this is a mistake. The pendulum will vibrate in a plane $x n y$, parallel to its original plane at m , as will be manifest if the plane of vibration points to some object in absolute space, such as a star. While the meridian line $m N$ will in the course of 24 hours range round the whole circle of the heavens, and point successively in the direction $n N$, $o N$, $p N$, $r N$, $s N$, $t N$, and $u N$, the pendulum's plane of vibration $x y$, whether at m , at n , at o , at p , at r , at s , at t , or at u , will always be parallel to itself, pointing invariably to the same star, and were a circular table placed under the pendulum, its plane of vibration, while really stationary, would appear to perform a complete revolution.

This stationary position of the plane of vibration at the pole seems to present little

difficulty. We impress a peculiar motion on the pendulum in setting it a going. The Earth is at the same time carrying the pendulum eastward, but *at the pole* the one motion will not interfere with the other. The only action of the Earth on the pendulum there is that of attracting it towards its own (the Earth's) centre. But this attraction is exactly in the plane of vibration and merely tends to continue the oscillatory motion without disturbing it. It is otherwise if the experiment is made at some other point, say 20 degrees distant from the pole. Supposing the vibrations to commence in the plane of the meridian, then as the tendency of the pendulum is to continue its vibrations in planes absolutely parallel to the original plane, it will be seen, if we trace both motions, that, while it is carried eastward with the Earth along a parallel of latitude, this tendency will operate to draw the plane of vibration away from a 'great circle' into a 'small circle' (that is, from a circle dividing the globe into two *equal* parts, into one dividing it into two *unequal* parts). But the pendulum *must* necessarily move in a 'great circle,' and hence to counteract its tendency to deviate into a 'small circle,' a correctory movement is constantly going on, to which the lengthening of the period necessary to complete a revolution must be ascribed. At Edinburgh

the period is about 29 hours, at Paris 32, at Cairo 48, at Calcutta 63. At the Equator, the period stretches out to infinity. M. Foucault's rule is, that the angular space passed over by the pendulum at any latitude in a given time, is equal to the angular motion of the Earth in the period, multiplied by the sine of the latitude. The angular motion of the Earth is 15 degrees per hour; and at the latitude of 30, for example, the sine being to radius as 500 to 1000, the angular motion of the pendulum will consequently be $7\frac{1}{2}$ degrees per hour. It is, therefore, easily found. It follows that the motions of the pendulum may be employed in a rough way to indicate the latitude of a place."*

Notwithstanding the apparent certainty of these pendulum experiments, and the supposed exactitude of the conclusions deducible therefrom, many of the same school of philosophy differed with each other, remained dissatisfied, and raised very serious objections both to the value of the experiments themselves, and to the supposed proof which they furnished of the Earth's rotation. One writer in the *Times* newspaper of the period, who signs himself "B. A. C.," says, "I have read the accounts of the Parisian experiment as they have appeared in many of our papers, and must confess that I

* Supplement of the *Manchester Examiner*, of May 24, 1851.

still remain unconvinced of the reality of the phenomenon. It appears to me that, except at the pole where the point of suspension is immovable, no result can be obtained. In other cases the shifting of the direction of passage through the lowest point that takes place during an excursion of the pendulum, from that point in one direction and its return to it again, will be exactly compensated by the corresponding shifting in the contrary direction during the pendulum's excursion on the opposite side. Take a particular case. Suppose the pendulum in any latitude to be set oscillating in the meridian plane, and to be started from the vertical towards the south. It is obvious that the wire by which it is suspended *does not continue to describe a plane*, but a species of conoidal surface; that when the pendulum has reached its extreme point its direction is to the south-west, and that as the tangent plane to the described surface through the point of suspension necessarily contains the normal to the Earth at the same point, the pendulum on its return passes through the same point in the direction north-east. Now, starting again from this point, we have exactly the circumstances of the last case, the primary plane being shifted slightly out of the meridian; when, therefore, the pendulum has reached its extreme point of excursion the

direction of the wire is to the west of this plane, and when it returns to the vertical the direction of passage through the lowest point is as much to the west of this plane as it was in the former case to the west of the meridian plane ; but since it is now moving from north to south instead of from south to north, as in the former case, its former deviation receives complete compensation, and the primary plane returns again to the meridian, when the whole process recurs."

In the *Liverpool Mercury* of May 23, 1851, the following letter appeared :—"The supposed manifestation of the Rotation of the Earth.—The French, English, and European continental journals have given publicity to an experiment made in Paris with a pendulum ; which experiment is said to have had the same results when made elsewhere. To the facts set forth no contradiction has been given, and it is therefore to be hoped that they are true. The correctness of the inferences drawn from the facts is another matter. The first position of these theorists is, that in a complete vacuum beyond the sphere of the Earth's atmosphere, a pendulum will continue to oscillate in one and the same original plane. On that supposition their whole theory is founded. In making this supposition the fact is overlooked that there *is no vibratory motion*

unless through atmospheric resistance, or by force opposing impulse. Perpetual progress in rectilinear motion may be imagined, as in the corpuscular theory of light ; circular motion may also be found in the planetary systems ; and parabolic and hyperbolic motions in those of comets ; but vibration is artificial and of limited duration. No body in nature returns the same road it went, unless artificially constrained to do so. The supposition of a permanent vibratory motion such as is presumed in the theory advanced, is *unfounded in fact*, and absurd in idea ; and the whole affair of this proclaimed discovery falls to the ground. It is what the French call a 'mystification'—anglice a 'humbug.'
 Liverpool, 22nd May, 1851." "T."

Another writer declared that he and others had made many experiments and had discovered that the plane of vibration had nothing whatever to do with the meridian longitude nor with the Earth's motion, but followed the plane of the magnetic meridian.

"A scientific gentleman in Dundee recently tried the pendulum experiment, and he says—'that the pendulum is capable of showing the Earth's motion I regard as a *gross delusion* ; but that it tends to the *magnetic meridian* I have found to be a fact.' " *

* *Liverpool Journal*, May 17, 1851.

In many cases the experiments have not shown a change at all in the plane of oscillation of the pendulum ; in others the alteration in the plane of vibration has been in the *wrong direction* ; and very often the *rate of variation* has been altogether different to that which theory indicated. The following is a case in illustration :—

“ On Wednesday evening the Rev. H. H. Jones, F.R.A.S., exhibited the apparatus of Foucault to illustrate the diurnal rotation of the Earth, in the Library Hall of the Manchester Athenæum. The preparations were simple. A circle of chalk was drawn in the centre of the floor, immediately under the arched skylight. The circle was exactly 360 inches in its circumference, every inch being intended to represent one degree. According to a calculation Mr. Jones had made, and which he produced at the Philosophical Society six weeks ago, the plane of oscillation of the pendulum would, at Manchester, diverge about one degree in five minutes, or perhaps a very little less. He therefore drew this circle exactly 360 inches round, and marked the inches on its circumference. The pendulum was hung from the skylight immediately over the centre of the circle, the point of suspension being 25 feet high. At that length of wire, it should require $2\frac{1}{2}$ seconds to make each oscillation across the circle. The brazen ball, which at the end of a

fine wire constituted the pendulum, was furnished with a point, to enable the spectator to observe the more easily its course. A long line was drawn through the diameter of the circle, due north and south, and the pendulum started so as to swing exactly along this line; to the westward of which, at intervals of three inches at the circumference, two other lines were drawn, passing through the centre. According to the theory, the pendulum should diverge from its original line towards the west, at the rate of one inch or degree in five minutes. This, however, Mr. Jones explained, was a perfection of accuracy only attainable in a vacuum, and rarely could be approached where the pendulum had to pass through an atmosphere subject to disturbances; besides, it was difficult to avoid giving it some slight lateral bias at starting. In order to obviate this as much as possible, the steel wire was as fine as would bear the weight, 1-30th of an inch thick; and the point of suspension was adjusted with delicate nicety. An iron bolt was screwed into the frame-work of the skylight; into it a brass nut was inserted—the wire passed through the nut (the hollow sides of which were bell-shaped, in order to give it fair play), and at the top the wire ended in a globular piece, there being also a fine screw to keep it from slipping. * * * The pendulum was gently drawn up to one side, at the southern end

of the diametrical line, and attached by a thread to something near. When it hung quite still the thread was burnt asunder, and the pendulum began to oscillate to and fro across the circle.

* * * Before it had been going on quite seven minutes, it had reached nearly the third degree towards the west, whereas it *ought* to have occupied a quarter of an hour in getting thus far from its starting line, even making no allowance for the resistance of the atmosphere.”*

Besides the irregularities so often observed in the time and direction of the pendulum vibrations, and which are quite sufficient to render them worthless as evidence of the Earth's motion, the use which the Newtonian astronomers made of the general fact that the plane of oscillation is variable, was most unfair and illogical. It was proclaimed to the world as a visible proof of the Earth's diurnal motion ; but the motion was *assumed to exist*, and then employed to explain the cause of the fact which was first called a proof of the thing assumed ! A greater violation of the laws of investigation was never perpetrated ! The whole subject as developed and applied by the theoretical philosophers is to the fullest degree unreasonable and absurd—not a “jot or tittle” better than the reasoning contained in the following letter :—“ Sir,—Allow me to call your

* “Manchester Examiner” (Supplement), May 24, 1851.

serious and polite attention to the extraordinary phenomenon, demonstrating the rotation of the Earth, which I at this present moment experience, and you yourself or anybody else, I have not the slightest doubt, would be satisfied of, under similar circumstances. Some sceptical and obstinate individuals may doubt that the Earth's motion is visible, but I say from personal observation its a positive fact. I don't care about latitude or longitude, or a vibratory pendulum revolving round the sine of a tangent on a spherical surface, nor axes, nor apsides, nor anything of the sort. That is all rubbish. All I know is, I see the ceiling of this coffee-room going round. I perceive this distinctly with the naked eye—only my sight has been sharpened by a slight stimulant. I write after my sixth go of brandy-and-water, whereof witness my hand,"—"Swiggins."—*Goose and Gridiron*, May 5, 1851.—"P.S. Why do two waiters come when I only call one?"*

The whole matter as handled by the astronomical theorists is fully deserving of the ridicule implied in the above quotation from *Punch*; but because great ingenuity has been shewn, and much thought and devotion manifested in connection with it, and the general public thereby greatly deceived, it is necessary that the subject

* "Punch," May 10, 1851.

should be fairly and seriously examined. What are the facts ?

First.—When a pendulum, constructed according to the plan of M. Foucault, is allowed to vibrate, its plane of vibration is often variable—*not always*. The variation when it *does* occur, is *not uniform*—is not always the same in the same place ; nor always the same either in its rate or velocity, or in its direction. It cannot therefore be taken as evidence ; for that which is inconstant cannot be used in favour of or against any given proposition. It therefore *is not evidence and proves nothing !*

Secondly.—If the plane of vibration *is* observed to change, where is the connection between such change and the supposed motion of the Earth ? What principle of reasoning guides the experimenter to the conclusion that it is the Earth which moves underneath the pendulum, and not the pendulum which moves over the Earth ? What logical right or necessity forces one conclusion in preference to the other ?

Thirdly.—Why was not the peculiar arrangement of the point of suspension of the pendulum specially considered, in regard to its possible influence upon the plane of oscillation ? Was it not known, or was it overlooked, or was it, in the climax of theoretical revelry, ignored that a “ball-and-socket” joint is one which facilitates *circular*

motion more readily than any other? and that a pendulum so suspended (as was M. Foucault's), could not, after passing over one arc of vibration, return through the same arc without there being many chances to one that its globular point of suspension would slightly turn or twist in its bed, and therefore give to the return or backward oscillation a slight change of direction? Let the *immediate cause* of the pendulum's liability to change its plane of vibration be traced; and it will be found not to have the slightest connection with the motion or non-motion of the surface over which it vibrates.


At a recent meeting of the French Academy of sciences, "M. Dehaut sent in a note, stating that M. Foucault (whose experiments on the pendulum effected a few years ago at the Pantheon, are of European notoriety) is not the first discoverer of the fact that the plane of oscillation of the free pendulum is invariable; but that the honour of the discovery is due to Poinsinet de Sivry, who, in 1782, stated, in a note to his translation of 'Pliny,' that a mariner's compass might be constructed without a magnet, by making a pendulum and setting it in motion in a given direction; because, provided the motion were continually kept up, the pendulum would continue to oscillate in the same direction, no matter by how many points, or how often the ship might happen to change her course."

SECTION 13.

PERSPECTIVE ON THE SEA.

It has been shown (at pages 25 to 34) that the law of perspective, as commonly taught in our Schools of Art, is fallacious and contrary to everything seen in nature. If an object be held up in the air, and gradually carried away from an observer who maintains his position, it is true that all its parts will converge to one and the same point ; but if the same object be placed upon the ground and similarly moved away from a fixed observer, the same predicate is false. In the first case the *centre* of the object is the *datum* to which every point of the exterior converges ; but in the second case the *ground* becomes the *datum*, in and towards which every part of the object converges in succession, beginning with the lowest, or that nearest to it.

Instances :—A man with light trousers and black boots walking along a level path, will appear at a certain distance as though the boots had been removed, and the trousers brought in contact with the ground.



A young girl, with short garments terminating ten or twelve inches above the feet, will, in walking forward, appear to sink towards the Earth, the space between which and the bottom of the clothes will appear to gradually diminish, and in the distance of half-a-mile the limbs, which were first seen for ten or twelve inches, will be invisible—the bottom of the garment will seem to touch the ground

A small dog running along will appear to gradually shorten by the legs, which, in less than half a mile, will be invisible, and the body appear to glide upon the earth.

Horses and cattle moving away from a given point will seem to have lost their hoofs, and to be walking upon the outer bones of the limbs.

Carriages similarly receding will seem to lose that portion of the rim of the wheels which touches the Earth ; the axles will seem to get lower ; and at the distance of a few miles, the body will appear to drag along in contact with the ground. This is very remarkable in the case of a railway carriage when moving away upon a straight and level portion of line several miles in length. These instances, which are but a few of what might be quoted, will be sufficient to prove, beyond the power of doubt or the necessity for controversy, that upon a plane or horizontal surface, the *lowest part* of bodies receding from

a given point of observation will disappear *before the higher*. This is precisely what is observed in the case of a ship at sea, when outward bound—the *lowest* part—the hull, disappearing before the higher parts—the sails and mast head. Abstractedly, when the lowest part of a receding object thus disappears by entering the “vanishing point,” it could be seen again to any and every extent by a telescope, if the power were sufficient to magnify at the distance observed. This is to a great extent practicable upon smooth horizontal surfaces, as upon frozen lakes or canals ; and upon long straight lines of railway. But the power of restoring such objects is greatly modified and diminished where the surface is undulating or otherwise moveable, as in large and level meadows, and pasture lands generally ; in the vast prairies and grassy plains of America ; and especially so upon the ocean, where the surface is always more or less in an undulating condition. In Holland and other level countries, persons have been seen in winter, skating upon the ice, at distances varying from ten to twenty miles. On some of the straight and “level” lines of railway which cross the prairies of America, the trains have been observed for more than twenty miles ; but upon the sea the conditions are altered, and the hull of a receding vessel can only be seen for a few miles, and this

will depend very greatly—the altitude of the observer being the same, upon the state of the water. When the surface is calm, the hull may be seen much farther than when it is rough and stormy ; but under ordinary circumstances, when to the naked eye the hull has just become invisible, or is doubtfully visible, it may be seen again distinctly by the aid of a powerful telescope. Although abstractedly or mathematically there should be no limit to this power of restoring by a telescope a lost object upon a smooth horizontal surface, upon the sea this limit is soon observed ; the water being variable in its degree of agitation, the limit of sight over its surface is equally variable, as shown by the following experiments:—In May, 1864, on several occasions when the water was unusually calm, from the landing stairs of the Victoria pier at Portsmouth, and from an elevation of 2 ft. 8 in. above the water, the greater part of the hull of the Nab Light-ship was, through a good telescope, distinctly visible ; but on other experiments being made, when the water was less calm, no portion of it could be seen from the same elevation, notwithstanding that the most powerful telescopes were employed. At other times half the hull, and sometimes only the upper part of the bulwarks, were visible. If the hull had been invisible from the rotundity of the Earth, the following

calculation will show that it should at all times have been 24 feet below the horizon :—The distance of the light-ship from the pier is 8 statute miles. The elevation of the observer being 32 inches above the water, would require 2 miles to be deducted as the distance of the supposed convex horizon ; for the square of 2 multiplied by 8 inches (the fall in the first mile of the Earth's curvation) equals 32 inches. This deducted from the 8 miles, will leave 6 miles as the distance from the horizon to the light-ship. Hence $6^2 \times 8 \text{ in.} = 288 \text{ inches, or } 24 \text{ feet.}$ The top of the bulwarks, it was said, rose about 10 ft. above the water line ; hence, deducting 10 from 24 feet, under all circumstances, even had the water been perfectly smooth and stationary, the top of the hull should have been 14 feet below the summit of the arc of water, or beneath the line of sight ! This one fact is entirely fatal to the doctrine of the Earth's rotundity. But such facts have been observed in various other places—the north-west light-ship in Liverpool Bay, and the light vessels of many other channels near the southern, eastern, and western shores of Great Britain. From the beach of Southsea Common, near Portsmouth, the observer lying down near the water, above the surface of which the eye was $2\frac{1}{2}$ feet, and with a telescope looking across Spithead to the quarantine ship lying in

the "Roads," between Ryde and Cowes, in the Isle of Wight, a distance of 7 miles, the copper sheathing of that vessel was distinctly seen, the depth of which was about 2 feet. Making the usual calculation in accordance with the doctrine of the Earth's convexity, it will be seen that an arc of water ought to have existed between the two points, the summit of which arc should have been 16 feet above the copper sheathing of the vessel !

From an elevation of $2\frac{1}{2}$ feet above the water opposite the Royal Yacht Club House, in West Cowes, Isle of Wight, the pile work and promenade of the pier at Stoke's Bay, near Gosport, and nearly opposite Osborne House, were easily distinguished through various telescopes : the distance is 7 miles, the altitude of the promenade 10 feet, and the usual calculation will show that this pier ought to have been many feet below the horizon !

It is a well-known fact that the light of the Eddystone lighthouse is often plainly visible from the beach in Plymouth Sound ; and sometimes, when the sea is very calm, persons can see it distinctly when sitting in ordinary rowing boats in that part of the Sound which will allow the line of sight to pass between Drake's Island and the western end of the Breakwater. The distance *is 14 statute miles*. In a list of lighthouses in a

work called "The Lighthouses of the World," by A. G. Findlay, F.R.G.S., published in 1862, by Richard H. Lawrie, 53, Fleet Street, London, it is said, at page 28 :—"In the Tables the height of the flame above the highest tide high water level is given, so that it is the *minimum* range of the light ; to this elevation 10 feet is added for the height of the deck of the ship above the sea. Besides the increased distance to which low water will cause the light to be seen, the effect of refraction will also sometimes increase their range." In the "Tables" above referred to, at page 36 the Eddystone light is said to be visible 13 miles. But these 13 miles are nautical measure ; and as 3 nautical miles equal $3\frac{1}{2}$ statute miles, the distance at which the Eddystone light is visible is over 15 statute miles. Notwithstanding that the Eddystone light is actually visible at a distance of 15 statute miles, and admitted to be so both by the Admiralty authorities and by calculation according to the doctrine of rotundity, very often at the same distance, the lantern is not visible at an elevation of 4 feet from the water ; showing that the law of perspective, previously referred to, is greatly influenced by the state of the surface of the water over which the line of sight is directed. A remarkable illustration of this influence is given in the *Western Daily Mercury*,

published in Plymouth, of October 25, 1864. Several discussions had previously taken place at the Plymouth Athenæum and the Devonport Mechanics' Institute, on the true figure of the Earth ; subsequent to which a committee was formed for the purpose of making experiments bearing on the question at issue. The names of the gentlemen as given in the above-named journal were "Parallax" (the author of this work), "Theta" (Mr. Henry, a teacher in Her Majesty's Dock-yard, Devonport), and Messrs. Osborne, Richards, Rickard, Mogg, Evers, and Pearce, all of Plymouth. From the report published as above stated, the following quotation is made :—
 Observation 6th : "*On the beach, at 5 feet from the water level, the Eddystone was entirely out of sight.*"

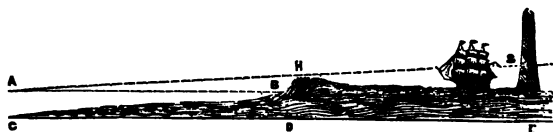
The matter may be summarized as follows :—
 At any time when the sea is calm and the weather clear, the Light of the Eddystone, which is 89 feet above the foundation on the rock, may be distinctly seen from an elevation of 5 feet above the water level ; according to the Admiralty directions, it "may be seen 13 nautical (or 15 statute) miles,"* or one mile still farther away than the position of the observers on the above-named occasion ; and yet *on that occasion*, and at a distance of only 14 statute miles, not-

* "Lighthouses of the World," p. 36.

withstanding that it was a very fine autumn day, and a clear back ground existed, not only was the lantern, which is 89 feet high, not visible, but the *top of the vane*, which is 100 feet above the foundation was, as stated in the report, "*entirely out of sight.*"

That vessels and lighthouses are sometimes more distinctly seen than at others ; and that the lower parts of such objects are sooner lost sight of when the sea is rough than when it is calm, are items in the experience of seafaring people as common as their knowledge of the changes in the weather ; and prominence is only given here to the above case because it was verified by persons of different opinions upon the subject of the Earth's form, and in the presence of several hundreds of the most learned and respectable inhabitants of Plymouth and the neighbourhood. The conclusion which such observations necessitate and force upon us is, that the law of perspective which is everywhere visible on land, is *modified* when observed in connection with objects upon or near the sea. But *how* modified ? If the water of the ocean were frozen and at perfect rest, any object upon its surface would be seen as far as telescopic or magnifying power could be brought to bear upon it. But because this is not the case—because the water is always more or less in

motion, not only of progression but of fluctuation, the swells and waves, into which the surface is broken operate to prevent the line of sight from passing parallel to the horizontal surface of the water. It has been shown at pages 16 to 20, and also at 25 to 33, that the surface of the Earth and Sea appears to rise up to the level, or altitude of the eye ; and that at a certain distance the line of sight and the surface which is parallel to it appear to converge to a "vanishing point;" which point is "the horizon." If this horizon, or vanishing point, were formed by the apparent junction of two *perfectly stationary* parallel lines, it could be penetrated by a telescope of sufficient power to magnify at the distance ; but because upon the sea the surface of the water is *not stationary*, the line of sight at the vanishing point becomes angular instead of parallel, and telescopic power is of little avail in restoring objects beyond this point. The following diagram will render this clear :—The hori-



zontal line C D E and the line of sight A B are parallel to each other, and appear to meet at the vanishing point B. But at and about this point

the line A B is intercepted by the undulating, or fluctuating surface of the water ; the degree of which is variable, being sometimes very great and at others inconsiderable, and having to pass over the crest of the waves, as at H, is obliged to become A H, instead of A B, and will therefore fall upon a ship, lighthouse, or other object at the point S, or higher or lower as such objects are more or less beyond the point H.

It is worthy of note that the waves at the point H, whatever their real magnitude may be, are *magnified* and rendered more obstructive by the very instrument—the telescope—which is employed to make the objects beyond more plainly visible: and thus the phenomenon is often very strikingly observed—that while a powerful telescope will render the sails and rigging of a ship when beyond the point H, or the optical horizon, so distinct that the very ropes are easily distinguished, not the slightest portion of the hull can be seen. The “crested waters” form a barrier to the horizontal line-of-sight, as substantial as would the summit of an intervening rock or island.

In the report which appeared in the *Western Daily Mercury*, of Oct. 25, 1864, the following observations were also recorded :—“ On the sea-front of the Camera house, and at an elevation of 110 feet from the mean level of the sea, a

this is a false depiction. Big corporate monopolies LOVE communism just like they did lots of business with the USSR. They actually support it. They are controlled by central bankers and staff and control government.



Communism means the STATE IS GOD, what the talmudist/kabbalists think is their racial right. BOTH communism and central bankerism/monopoly capitalism are jewish inventions, two kabbalistic pillars to be synthesized via dialectical materialism of the synagogue and tools like freemasonry, scientism, NAZISM, etc etc etc

plane mirror was fixed, by the aid of a plumb-line, in a *true vertical position*. In this mirror the distant horizon was distinctly visible on a level with the eye of the observer. This was the simple fact, as observed by the several members of the committee which had been appointed. But some of the observers remarked that the line of the horizon in the mirror rose and fell with the eye, as also did every thing else which was reflected, and that this ought to be recorded as an *addendum*—granted. The surface of the sea appeared to regularly ascend from the base of the Hoe to the distant horizon. The horizon from the extreme east to the west, as far as the eye could see, was parallel to a horizontal line.”

The following version was recorded in the same journal, of the same date, and was furnished by one of the committee who had manifested a very marked aversion to the doctrine that the surface of all water is horizontal :—“ A vertical looking-glass was suspended from the Camera and the horizon seen in it, as well as various other objects reflected, rising and falling with the eye. The water was seen in the glass to ascend from the base of the Hoe to the horizon. The horizon appeared parallel to a horizontal line.”

It will be observed that the two reports are *substantially* the same, and very strongly corro-

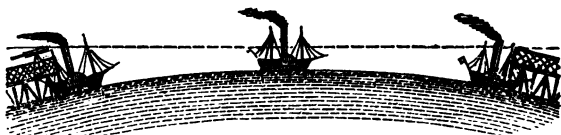
borate the remarks made at pages 15, 16, and 17 of this work. Indeed no other report could have been given without the author's becoming subject to the charge of glaring, obstinate, and wilful misrepresentation. What then has again been demonstrated? That the surface of all water *is horizontal*, and that, therefore, the Earth cannot possibly be anything other than a Plane. All appearances to the contrary have been shown to be purely optical and adventitious.

Another proof that the surface of all water is horizontal and that therefore the Earth cannot be a globe is furnished by the following experiment, which was made in May, 1864, on the new pier at Southsea, near Portsmouth :—A telescope was fixed upon a stand and directed across the water at Spithead to the pier head at Ryde, in the Isle of Wight, as shown in the subjoined diagram. The line of sight crossed a certain



part of the funnel of one of the regular steamers trading between Portsmouth and the Isle of Wight; and it was observed to cut or fall upon the same part during the whole of the passage to Ryde Pier, thus proving that the water between

the two piers is horizontal, because it was parallel to the line of sight from the telescope fixed at Southsea. If the Earth were a globe the channel between Ryde and Southsea would be an arc of a circle, and as the distance across is $4\frac{1}{2}$ statute miles the centre of the arc would be 40 inches higher than the two sides; and the steamer would have ascended an inclined plane for $2\frac{1}{4}$ miles, or to the centre of the channel, and afterwards descended for the same distance towards Ryde. This ascent and descent would have been marked by the line of sight falling 40 inches nearer to the deck of the steamer when on the centre of the arc of water, as represented in the following diagram; but as the line of sight did



not cut the steamer lower down when in the centre of the channel, and no such ascent and descent was observed, it follows necessarily that the surface of the water between Southsea and the Isle of Wight is *not convex*, and therefore the Earth as a whole is *not a globe*. The evidence against the doctrine of the Earth's rotundity is so clear and perfect, and so *completely* fulfils the conditions required in special

and independent investigations, that it is impossible for any person who can put aside the bias of previous education to avoid the opposite conclusion that the *Earth is a plane*. This conclusion is greatly confirmed by the experience of mariners in regard to certain lighthouses. Where the light is fixed and very brilliant it can be seen at a distance, which the present doctrine of the Earth's rotundity would render altogether impossible. For instance, at page 35 of "Lighthouses of the World," the Ryde Pier Light, erected in 1852, is described as a bright fixed light, 21 feet above high water, and visible from an altitude of 10 feet at the distance of 12 nautical or 14 statute miles. The altitude of 10 feet would place the horizon at the distance of 4 statute miles from the observer. The square of the remaining 10 statute miles multiplied by 8 inches will give a fall or curvature downwards from the horizon of 66 feet. Deduct from this 21 feet, the altitude of the light, and we have 45 feet as the amount which the light ought to be *below the horizon!*

By the same authority, at page 39, the Bidston Hill Lighthouse, near Liverpool, is 228 feet above high water, one bright fixed light, visible 23 nautical or very nearly 27 statute miles. Deducting 4 miles for the height of the observer, squaring the remaining 23 miles and multiplying

that product by 8 inches we have a downward curvature of 352 feet ; from this deduct the altitude of the light, 228 feet, and there remains 124 feet as the distance which the light should be *below the horizon !*

Again, at page 40 :—" The lower light on the 'Calf of Man' is 282 feet above high water, and is visible 23 nautical miles." The usual calculation will show that it ought to be 70 feet *below the horizon !*

At page 41 the Cromer light is described as having an altitude of 274 feet above high water, and is visible 23 nautical miles, whereas it ought to be at that distance 78 feet *below the horizon !*

At page 9 it is said :—" The coal fire (which was once used) on the Spurn Point Lighthouse, at the mouth of the Humber, which was constructed on a good principle for burning, has been seen 30 miles off." If the miles here given are nautical measure they would be equal to 35 statute miles. Deducting 4 miles as the usual amount for the distance of the horizon, there will remain 31 miles, which squared and multiplied by 8 inches will give 640 feet as the declination of the water from the horizon to the base of the Lighthouse, the altitude of which is given at page 42 as 93 feet above high water. This amount deducted from the above 640 feet will leave 547 feet as the distance which the

Spurn Light ought to have been *below the horizon* !

The two High Whitby Lights are 240 feet above high water (see page 42), and are visible 23 nautical miles at sea. The proper calculation will be 102 feet *below the horizon* !

At page 43, it is said that the Lower Farn Island Light is visible for 12 nautical or 14 statute miles, and the height above high water is 45 feet. The usual calculation will show that this light ought to be 67 feet *below the horizon* !

The Hekkengen Light, on the west coast of Norway (see page 54), is 66 feet above high water, and visible 16 statute miles. It ought to be sunk beneath the horizon 30 feet !

The Troudhjem Light (see p. 55), on the Ringholm Rock, west coast of Norway, is 51 feet high, and is visible 16 statute miles ; but ought to be 45 feet below the horizon !

The Rondö Light, also on the west coast of Norway (see p. 55), is 161 feet high, and is visible for 25 statute miles ; the proper calculation will prove that it ought to be above 130 feet below the horizon !

The Egerö Light, on west point of Island, south cost of Norway (see p. 56), and which is fitted up with the first order of the dioptric lights, is visible for 28 statute miles, and the altitude above high water is 154 feet ; making

the usual calculation we find this light ought to be depressed, or sunk, below the horizon 230 feet !

The Dunkerque Light, on the north coast of France (see p. 71), is 194 feet high, and visible 28 statute miles. The ordinary calculation will show that it ought to be 190 feet below the horizon !

The Goulfar Bay Light, on the west coast of France, is said at page 77, to be visible 31 statute miles, and to have an altitude at high water of 276 feet, at the distance given it ought to be 210 feet below the horizon !

At page 78, the Cordonan Light, on the River Gironde, west coast of France, is given as being visible 31 statute miles, and its altitude 207 feet, which would give its depression below the horizon as nearly 280 feet !

The Light at Madras (p. 104), on the Esplanade, is 132 feet high, and visible 28 statute miles, whereas at that distance it ought to be beneath the horizon above 250 feet !

The Port Nicholson Light, in New Zealand, erected in 1859 (p. 110), is visible 35 statute miles, the altitude is 420 feet above high water, and ought, if the water is convex, to be 220 feet below the horizon !

The Light on Cape Bonavista, Newfoundland, is 150 feet above high water, and is visible 35

statute miles (p. 111), this will give on calculation for the Earth's rotundity, 491 feet that the Light should be below the horizon !

Many other cases could be given from the same work, shewing that the practical observations of mariners, engineers, and surveyors, entirely ignore the doctrine that the Earth is a globe. The following cases taken from miscellaneous sources will be interesting as bearing upon and leading to the same conclusion. In the *Illustrated London News* of Oct. 20, 1849, an engraving is given of a new Lighthouse erected on the Irish coast. The accompanying descriptive matter contains the following sentence :—" Ballycotton Island rises 170 feet above the level of the sea ; the height of the Lighthouse is 60 feet including the Lantern ; giving the light an elevation of 230 feet, which is visible upwards of 35 miles to sea." If the 35 miles are nautical measure the distance in statute measure would be over 40 miles ; and allowing the usual distance for the horizon, there would be 36 miles from thence to the Lighthouse. The square of 36 multiplied by 8 inches amounts to 864 feet ; deduct the total altitude of the Lantern, 230 feet, and the remainder, 634 feet, is the distance which the Light of Ballycotton ought to be below the horizon !

In the *Times* newspaper of Monday, Oct. 16, 1854, in an account of her Majesty's visit to Great Grimsby from Hull, the following paragraph occurs :—" Their attention was first naturally directed to a gigantic tower which rises from the centre pier to the height of 300 feet, and can be seen 60 miles out at sea." The 60 miles if nautical, and this is always understood when referring to distances at sea, would make 70 statute miles, to which the fall of 8 inches belongs, and as all observations at sea are considered to be made at an elevation of 10 feet above the water, for which four miles must be deducted from the whole distance, 66 statute miles will remain, the square of which multiplied by 8 inches, gives a declination towards the tower of 2,904 feet ; deducting from this the altitude of the tower, 300 feet, we obtain the startling conclusion that the tower should be at the distance at which it is visible, (60 nautical miles,) more than 2,600 feet *below the horizon !*

The only modification which can be made or allowed in the preceding calculations is that for refraction, which is considered by surveyors generally to amount to about 1-12th of the altitude of the object observed. If we make this allowance it will reduce the various quotients by 1-12th, which is so little that the whole will

substantially the same. Take the last station as an instance—2,600 feet divided 12 gives 206, which deducted from 2,600 gives 2,384 as the corrected amount for action.

SECTION 14.

GENERAL SUMMARY—APPLICATION—

CUI BONO ?

IN the preceding sections it has been shown that the Copernican, or Newtonian theory of Astronomy is "an absurd composition of truth and error;" and, as admitted by its founder, "not necessarily true or even probable," and that instead of its being a general conclusion derived from known and admitted facts, it is a heterogeneous compound of assumed premises, isolated truths, and variable appearances in nature. Its advocates are challenged to show a single instance wherein a phenomenon is explained, a calculation made, or a conclusion advanced without the aid of an avowed or implied assumption! The very construction of a theory at all, and especially such as the Copernican, is a complete violation of that natural and legitimate mode of investigation to which the term *zetetic* has been applied. The doctrine of the universality of gravitation is an assumption, made only in accord-

ance with that "pride and ambition which has led philosophers to think it beneath them to offer anything less to the world than a complete and finished system of nature." It was said, in effect, by Newton, and has ever since been insisted upon by his disciples—"Allow us, without proof, the existence of two universal forces—centrifugal and centripetal, or attraction and repulsion, and we will construct a system which shall explain all the leading mysteries of nature. An apple falling from a tree, or a stone rolling downwards, and a pail of water tied to a string set in rapid motion were assumed to be types of the relations existing among all the bodies in the universe. The moon was assumed to have a tendency to fall towards the Earth, and the Earth and Moon together towards the Sun. The same relation was assumed to exist between all the smaller and larger luminaries in the firmament ; and it soon became necessary to extend this assumption to infinity. The universe was parcelled out into systems—co-existent and illimitable. Suns, Planets, Satellites, and Comets were assumed to exist, infinite in number and boundless in extent ; and to enable the theorists to explain the alternating and constantly recurring phenomena which were everywhere observable, these numberless and for-ever-extending objects were assumed to be spheres. The Earth

we inhabit was called a *planet*; and because it was thought to be reasonable that the luminous objects in the firmament which were called *planets* were *spherical* and had *motion*, so it was only reasonable to suppose that as the Earth was a planet it must also be spherical and have motion—*ergo*, the Earth is a globe, and moves upon axes and in an orbit round the Sun! And as the Earth is a globe, and is inhabited, so again it is only reasonable to conclude that the planets are worlds like the Earth, and are inhabited by sentient beings! What reasoning! Assumption upon assumption, and the conclusion derived therefrom called a thing proved, to be employed as a truth to substantiate the first assumption! Such a “juggle and jumble” of fancies and falsehoods, extended and intensified as it is in theoretical astronomy, is calculated to make the unprejudiced inquirer revolt in horror from the terrible conjuration which has been practised upon him; to sternly resolve to resist its further progress; to endeavour to overthrow the entire edifice, and to bury in its ruins the false honours which have been associated with its fabricators, and which still attach to its devotees. For the learning, the patience, the perseverance, and devotion for which they have ever been examples, honour and applause need not be withheld; but *their false reasoning*, the advantages they have

taken of the general ignorance of mankind in respect to astronomical subjects, and the unfounded theories they have advanced and defended, cannot but be regretted, and ought to be resisted. It has become a duty, paramount and imperative, to meet them in open, avowed, and unyielding rebellion; to declare that their unopposed reign of error and confusion is over; and that henceforth, like a falling dynasty, they must shrink and disappear, leaving the throne and the kingdom to those awakening intellects whose numbers are constantly increasing, and whose march is rapid and irresistible. The soldiers of truth and reason have drawn the sword, and ere another generation has been educated, will have forced the usurper to abdicate. The axe is lifted—it is falling, and in a very few years will have “cut the cumberer down.”

The Earth a Globe, and it is necessarily demanded that it has a diurnal and an annual and various other motions; for a globular world without motion would be useless—day and night, winter and summer, the half year’s light and darkness at the “North Pole,” and other phenomena could not be explained by the supposition of rotundity without the assumption also of rapid and constant motion. Hence it is *assumed* that the Earth and Moon, and all the Planets

and their Satellites move in relation to each other, and that the whole move together in different planes round the Sun. The Sun and its "system" of revolving bodies are now assumed to have a general and all-inclusive motion, in common with an endless series of other Suns and systems, around some other and "central Sun" which has been assumed to be the true axis and centre of the Universe ! These assumed general motions with the particular and peculiar motions which are assigned to the various bodies in detail, together constitute a system so confused and complicated that it is almost impossible and always difficult of comprehension by the most active and devoted minds. The most simple and direct experiments, however, may be shown to prove that the Earth has no progressive motion whatever ; and here again the advocates of this interminable and entangling arrangement are challenged to produce a single instance of so called proofs of these motions which does not involve an assumption—often a glaring falsehood—but always a point which is not, or cannot be demonstrated.

The magnitudes, distances, velocities, and periodic times which these assumed motions eliminate, are all glaringly fictitious, because they are only such as a false theory creates a necessity for. It is geometrically demonstrable

that all the visible luminaries in the firmament are within a distance of a few thousand miles, not more than the space which stretches between the North Pole and the Cape of Good Hope ; and the principle of measurement—that of plane triangulation—which demonstrates this important fact, is one which no mathematician, demanding to be considered a master in the science, dare for a moment deny. All these luminaries then, and the Sun itself, being so near to us, cannot be other than very small as compared with the Earth we inhabit. They are all in motion over the Earth, which is alone immoveable, and therefore they cannot be anything more than secondary and subservient structures, ministering to this fixed material world, and to its inhabitants. This is a plain, simple, and in every respect demonstrable philosophy, agreeing with the evidence of our senses, borne out by every fairly instituted experiment, and never requiring a violation of those principles of investigation which the human mind has ever recognized, and depended upon in its every day life. The modern, or Newtonian Astronomy, has none of these characteristics. The whole system taken together constitutes a most monstrous absurdity. It is false in its foundation ; irregular, unfair, and illogical in its details ; and in its conclusions inconsistent and contradictory. Worse than all,

it is a prolific source of irreligion and of atheism, of which its advocates are, practically, supporters ! By defending a system which is directly opposite to that which is taught in connection with all religions, they lead the more critical and daring intellects to reject the scriptures altogether, to ignore the worship, and doubt and deny the existence of a Supreme Ruler of the world. Many of the primest minds are thus irreparably injured, robbed of those present pleasures, and that cheering hope of the future which the earnest christian devotee holds as of far greater value than all earthly wealth and grandeur ; or than the mastery of all the philosophical complications which the human mind ever invented.

The doctrine of the Earth's rotundity and motion is now shown to be unconditionally false ; and therefore the scriptures which assert the contrary, are, in their philosophical teachings at least, *literally true*. In practical science therefore, atheism and denial of scriptural authority have no foundation. If human theories are cast aside, and the facts of nature, and legitimate reasoning alone depended upon, it will be seen that religion and true philosophy are not antagonistic, and that the hopes which both encourage may be fully relied upon. To the religious mind this matter is most important, it is indeed no less *than a sacred question*, for it renders complete

the evidence that the Jewish and Christian scriptures are true, and must have been communicated to mankind by an anterior and supernal Being. For if after so many ages of mental struggling, of speculation and trial, and change and counterchange, we have at length discovered that all astronomical theories are false, that the Earth is a plane, and motionless, and that the various luminaries above it are lights only and not worlds ; and that these very doctrines have been taught and recorded in a work which has been handed down to us from the earliest times ; from a time, in fact, when mankind could not have had sufficient experience to enable them to criticise and doubt, much less to invent, it follows that whoever dictated and caused such doctrines to be recorded and preserved to all future generations, must have been superhuman, omniscient, and, to the Earth and its inhabitants pre-existent.

To the dogged Atheist, whose “mind is made up” not to enter into any further investigation, and not to admit of possible error in his past conclusions, this question is of no more account than it is to an Ox. He who cares not to re-examine from time to time his state of mind, and the result of his accumulated experience is in no single respect better than the lowest animal in creation. He may see nothing higher,

more noble, more intelligent or beautiful than himself; and in this his pride, conceit, and vanity find an incarnation. To such a creature there is no God, for he is himself an equal with the highest being he has ever recognised! Such Atheism exists to an alarming extent among the philosophers of Europe and America; and it has been mainly fostered by the astronomical and geological theories of the day. Besides which, in consequence of the differences between the language of Scripture and the teachings of modern Astronomy, there is to be found in the very hearts of Christian and Jewish congregations a sort of "smouldering scepticism;" a kind of faint suspicion which causes great numbers to manifest a cold and visible indifference to religious requirements. It is this which has led thousands to desert the cause of earnest, active Christianity, and which has forced the majority of those who still remain in the ranks of religion to declare "that the Scriptures were not intended to teach correctly other than moral and religious doctrines; that the references so often made to the physical world, and to natural phenomena generally, are given in language to suit the prevailing notions and the ignorance of the people." A Christian philosopher who wrote almost a century ago in reference to remarks similar to *the above*, says, "Why should we suspect that

Moses, Joshua, David, Solomon, and the later prophets and inspired writers have counterfeited their sentiments concerning the order of the universe, from pure complaisance, or being in any way obliged to dissemble with a view to gratify the prepossessions of the populace? These eminent men being kings, lawgivers, and generals themselves, or always privileged with access to the courts of sovereign princes, besides the reverence and awful dignity which the power of divination and working of miracles procured to them, had great worldly and spiritual authority.

. . . They had often in charge to command, suspend, revert, and otherwise interfere with the course and laws of nature, and were never daunted to speak out the truth before the most mighty potentates on earth, much less would they be overawed by the *vox populi*." To say that the Scriptures were not intended to teach science truthfully, is in substance to declare that God himself has stated, and commissioned His prophets to teach things which are utterly false! Those Newtonian philosophers who still hold that the sacred volume is the Word of God, are thus placed in a fearful dilemma. How can the two systems, so directly opposite in character, be reconciled? Oil and water alone will not combine—mix them by violence as we may, they will again separate when allowed to rest. Call

oil oil, and water water, and acknowledge them to be distinct in nature and value ; but let no “hodge-podge” be attempted, and passed off as a genuine compound of oil and water. Call Scripture the Word of God—the Creator and Ruler of all things, and the Fountain of all Truth ; and call the Newtonian or Copernican Astronomy the word and work of man, of man, too, in his vainest mood—so vain and conceited as not to be content with the direct and simple teachings of his Maker, but who must rise up in rebellion and conjure into existence a fanciful complicated fabric, which being insisted upon as true, creates and necessitates the dark and horrible interrogatives—Is God a deceiver ? Has He spoken direct and unequivocal falsehood ? Can we no longer indulge in the beautiful and consoling thought that God’s justice, and love, and truth are unchanging and reliable for ever ? Let Christians—for Sceptics and Atheists may be left out of the question—to whatever division of the Church they belong, look at this matter calmly and earnestly. Let them determine to uproot the deception which has led them to think that they can altogether ignore the plainest astronomical teaching of Scripture, and endorse a system to which it is in every sense opposed. The following language is quoted as an instance *of the manner* in which the doctrine of the

Earth's rotundity and the plurality of worlds interferes with Scriptural teachings :—" The theory of original sin is confuted (by our astronomical and geological knowledge), and I cannot permit the belief, when I know that our world is but a mere speck, a perishable atom in the vast space of creation, that God should just select this little spot to descend upon and assume our form, and clothe Himself in our flesh, to become visible to human eyes, to the tiny beings of this comparatively insignificant world. . . . Thus millions of distant worlds, with the beings allotted to them, were to be extirpated and destroyed in consequence of the original sin of Adam. No sentiment of the human mind can surely be more derogatory to the Divine attributes of the Creator, nor more repugnant to the known economy of the celestial bodies. For in the first place, who is to say, among the infinity of worlds, whether Adam was the *only creature* who was tempted by Satan and fell, and by his fall involved all the other worlds in his guilt."*

The difficulty experienced by the author of the above remarks is clearly one which can no longer exist, when it is seen that the doctrine of a plurality of worlds is an impossibility. That it is an impossibility is shown by the fact that the Sun, Moon, and Stars are very small bodies,

* Encyclopædia Londonensis, p. 457, vol. 2.

and very near to the earth ; this fact is proved by actual non-theoretical measurement ; this measurement is made on the principle of plane trigonometry : this principle of plane trigonometry is adopted because the Earth is a Plane ; and all the base lines employed in the triangulation are horizontal. By the same practical method of reasoning, all the difficulties which, upon geological and astronomical grounds, have been raised to the literal teachings of the scriptures, may be completely destroyed. Instances :—The scriptures repeatedly declare that the Sun moves over the Earth—“ His going forth is from the end of the heaven, and his circuit unto the ends of it.” “ He ariseth and goeth down, and hasteth to his place whence he arose.” “ The sun stood still in the midst of heaven.” “ Great is the Earth, high is the heaven, swift is the Sun in his course.” In the religious poems of all ages the same fact is presented. Christians especially, of every denomination, are familiar with, and often read and sing with delight such poetry as the following :—

“ My God who makes the Sun to know
His proper hour to rise,
And to give light to all below
Doth send him *round the skies*.”

“ When from the chambers of the east
His *morning race* begins,
He never tires *nor stops to rest*,
But round the world he shines.”

"God of the morning, at whose voice,
The cheerful sun makes haste to rise,
And, like a giant, doth rejoice,
To *run his journey through the skies.*"

"He sends the sun *his circuit round*,
To cheer the fruits and warm the ground."

"How fair has the day been!
How bright was the Sun!
How lovely and joyful
The *course that he run.*"

All the expressions of scripture are consistent with the fact of the Sun's motion. They never declare anything to the contrary. Whenever they speak of the subject it is in the same manner. The direct evidence of our senses confirms it ; and actual and special observations, as well as the most practical scientific experiments, declare the same thing. The progressive and concentric motion of the Sun over the Earth is in every sense demonstrable ; yet the Newtonian astronomers insist upon it that the Sun does not really move, that it only *appears* to move, and that this appearance arises from the motion of the Earth ; that when, as the scriptures affirm, the "Sun stood still in the midst of heaven," it was the *Earth* which stood still and *not* the Sun ! that the scriptures therefore speak falsely, and the experiments of science, and the observations and applications of our senses are never to be relied upon. Whence comes this bold and arrogant denial of the value of our senses and judgement,

and the authority of scripture? The Earth or the Sun moves. Our senses tell us, and the scriptures declare that the Earth is fixed and that it is the Sun which moves above and around it; but a *theory*, which is absolutely false in its groundwork, and ridiculously illogical in its details, demands that the Earth is round and moves upon axes, and in several other and various directions; and that these motions are *sufficient to account for* certain phenomena without supposing that the Sun moves, *therefore* the Sun is a fixed body, and his motion is *only apparent*! Such *reasoning* is a disgrace to philosophy, and fearfully dangerous to the religious interests of humanity!

Christian ministers and commentators find it a most unwelcome task when called upon to reconcile the plain and simple philosophy of the scriptures with the monstrous teachings of theoretical astronomy. Dr. Adam Clark, in a letter to the Rev. Thomas Roberts, of Bath,* speaking of the progress of his commentary, and of his endeavours to reconcile the statements of scripture with the modern astronomy, says: "Joshua's Sun and Moon standing still, have kept me going for nearly three weeks! That one chapter has afforded me more vexation than anything I have ever met with; and even now I am but

* Life of Adam Clark, 8vo Edition.

about half satisfied with my own solution of all the difficulties, though I am confident that I have removed mountains that were never touched before ; shall I say that I am heartily weary of my work, so weary that I have a thousand times wished I had never written one page of it, and am repeatedly purposing to give it up."

The Rev. John Wesley, in his journal, writes as follows :—"The more I consider them the more I doubt of all systems of astronomy. I doubt whether we can with certainty know either the distance or magnitude of any star in the firmament ; else why do astronomers so immensely differ, even with regard to the distance of the Sun from the Earth ? Some affirming it to be only three and others ninety millions of miles."*

In vol. 3, page 203, the following entry occurs :—"January 1st, 1765.—This week I wrote an answer to a warm letter published in the *London Magazine*, the author whereof is much displeased that I presume to doubt of the 'modern astronomy.' I cannot help it. Nay, the more I consider the more my doubts increase ; so that at present I doubt whether any man on earth knows either the distance or magnitude, I will not say of a fixed Star, but Saturn or Jupiter—yea of the Sun or Moon."

* Extracts from works of Rev. J. Wesley, 3rd Edition, 1829. Published by Mason, London, p. 392, vol. 2.

In vol. 13, page 359, he says :—" And so the whole hypothesis of innumerable Suns and worlds moving round them vanishes into air." And again at page 430 of same volume, the following words occur :—" The planets revolutions we are acquainted with, but who is able to this day, regularly to demonstrate either their magnitude or their distance? Unless he will prove, as is the usual way, the magnitude from the distance, and the distance from the magnitude. * * *

Dr. Rogers has evidently demonstrated that no conjunction of the centrifugal and centripetal forces can possibly account for this, or even cause any body to move in an elipsis." There are several other incidental remarks to be found in his writings which shew that the Rev. John Wesley was well acquainted with the then modern astronomy; and that he saw clearly both its self-contradictory and its anti-scriptural character.

It is a very popular idea among modern astronomers that the stellar universe is an endless congeries of systems, of Suns and attendant worlds peopled with sentient beings analogous in the purpose and destiny of their existence to the inhabitants of this earth. This doctrine of a plurality of worlds, although it conveys the most magnificent ideas of the universe, is purely fanciful, and may be compared to the "dreams of the alchemists" who laboured with unheard

of enthusiasm to discover the "philosopher's stone," the *elixir vitæ*, and the "universal solvent." However grand the first two projects might have been in their realisation, it is known that they were never developed in a practical sense, and the latter idea of a solvent which would dissolve everything was suddenly and unexpectedly destroyed by the few remarks of a simple but critical observer, who demanded to know what service a substance would be to them which would dissolve all things? What could they keep it in? for it would dissolve every vessel wherein they sought to preserve it! This idea of a plurality of worlds is but a natural and reasonable conclusion drawn from the doctrine of the Earth's rotundity. But this doctrine being false its off shoot is equally so. The supposition that the heavenly bodies are Sun's and inhabited worlds is demonstrably impossible in nature, and has no foundation whatever in Scripture. "In the beginning God created the Heaven and *the Earth*." One Earth *only* is created; and the fact is more especially described in Genesis, ch. i., v. 10. Where, instead of the word "Earth" meaning both land and water as together forming a globe, as it does in the Newtonian astronomy, only the *dry land* was called *earth*," and "the gathering together of the waters called *He seas*." The Sun, Moon, and

Stars are described as lights only and not worlds. A great number of passages might be quoted which prove that no other material world is ever in the slightest manner referred to by the sacred writers. The creation of the world ; the origin of evil, and the fall of man ; the plan of redemption by the death of Christ ; the day of judgement, and the final consummation of all things are invariably associated with *this Earth alone*. The expression in Hebrews, ch. i., v. 2, "by whom also he made the *worlds*," and in Heb., ch. ii., v. 3, "through faith we understand that the *worlds* were framed," are known to be a comparatively recent rendering from the original Greek documents. The word which has been translated *worlds* is fully as capable of being rendered in the singular number as the plural ; and previous to the introduction of the Copernican Astronomy was always translated "*the world*." The Roman Catholic and the French Protestant Bibles still contain the singular number ; and in a copy of an English Protestant Bible printed in the year 1608, the following translation is given :—"Through faith we understand that *the world* was ordained." So that either the plural expression "worlds" was used in later translations to accord with the astronomical notions then recently introduced, or it was meant to include *the Earth* and the spiritual world, as referred to in :—

Hebrews ii., 5—"For unto angels hath he not put into subjection *the world to come*."

Ephesians i., 21—"Far above all principality and power, and might, and dominion, and every name that is named not only in *this world*, but also in *that which is to come*."

Luke xviii., 29, 30—"There is no man that hath left house, or parents, or brethren, or wife, or children, for the kingdom of God's sake, who shall not receive manifold more in this *present time*, and in *the world to come* life everlasting."

Matthew xii., 32—"Whosoever speaketh against the Holy Ghost, it shall not be forgiven him, neither in *this world* neither in *the world to come*."

The Scriptures teach that in the day of the Lord "the Heavens shall pass away with a great noise; and the elements shall melt with fervent heat," and the "stars of Heaven fall unto the Earth even as a fig tree casteth her untimely figs when shaken of a mighty wind." The Newtonian system of astronomy declares that the stars and planets are mighty worlds—nearly all of them much larger than this Earth. The fixed stars are considered to be suns, equal to if not greater than our own sun, which is said to be above 800,000 miles in diameter. All this is proveably false, but to those who have been led to believe it, the difficult question arises,—"*How can*

thousands of stars fall upon the Earth, which is many times less than any one of them?" How can the Earth with a supposed diameter of 8000 miles receive the numerous suns of the firmament many of which are said to be a million miles in diameter?

These stars are assumed to have positions so far from the Earth that the distance is almost inexpressible; figures indeed may be arranged on paper but in reading them no practical idea is conveyed to the mind. Many of them are said to be so distant that should they fall with the velocity of light or above one hundred and sixty thousand miles in a second, or six hundred millions of miles per hour, they would require nearly two millions of years to reach the Earth! Sir William Herschel in a paper on "The power of telescopes to penetrate into space," published in the *Philosophical Transactions* for the year 1800, affirms, that with his powerful instruments he discovered brilliant luminaries so far from the Earth that the light from them "could not have been less than *one million nine hundred thousand years in its progress.*" Again the difficulty presents itself—"If the stars of Heaven begin to fall to-day, and with the greatest imaginable velocity, millions of years must elapse before they reach the Earth!" *But the Scriptures declare that these changes*

shall occur suddenly—shall come, indeed, “as a thief in the night.”

The same theory, with its false and inconceivable distances and magnitudes, operates to destroy all the ordinary, common sense, and scripturally authorised chronology. Christian and Jewish commentators, unless astronomically educated, hold and teach that the Earth, as well as the Sun, Moon, and Stars, were created about 4,000 years before the birth of Christ, or less than 6,000 years before the present time. But if many of these luminaries are so distant that their light would require above a million of years to reach us; and if, as we are taught, bodies are visible to us because of the light which they reflect or radiate, then their light *has* reached us, because we have been able to see them, and therefore they must have been shining, and must have been created at least *one million nine hundred thousand years ago* ! The chronology of the bible indicates that a period of six thousand years has not yet elapsed since “the Heavens and the Earth were finished, and *all* the Host of them.”

In the modern astronomy, Continents, Oceans, Seas, and Islands, are considered as together forming one vast Globe of 25,000 miles in circumference. This has been shown to be fallacious, and it is clearly contrary to the plain, literal teaching of the scriptures. In the *first chapter*

of Genesis, we find the following language: "and God said let the waters under the heaven be gathered unto one place, and let the *dry land* appear; and it was so. And God called the dry land *Earth*, and the gathering together of the waters called *He Seas*." Here the Earth and Seas—Earth and the great body of waters, are described as two distinct and independent regions, and not as together forming one Globe which astronomers call "the Earth." This description is confirmed by several other passages of scripture.

2 *Peter*, iii., 5—"For this they willingly are ignorant of, that by the Word of God the Heavens were of old, and the Earth *standing out of the waters and in the waters*."

Psalms cxxxvi., 6—"O give thanks to the Lord of Lords, that by wisdom made the heavens, and that *stretchet out the earth above the waters*."

Psalms xxiv., 1, 2—"The earth is the Lord's and the fulness thereof; the world and they that dwell therein: for he hath *founded it upon the seas, and established it upon the floods*."

Hermes (New Testament Apocrypha)—"Who with the word of his strength fixed the heaven; and *founded the earth upon the waters*."

Job xxvi., 7—"He stretcheth out the north over the empty place, and hangeth the Earth *upon nothing*."

Some think that the latter part of this verse, "hangeth the Earth upon nothing," favours the idea that the Earth is a globe revolving in space without visible support; but Dr. Adam Clark, although himself a Newtonian philosopher, says, in his commentary upon this passage in Job, the literal translation is, "on the hollow or empty waste," and he quotes a Chaldee version of the passage which runs as follows: "He layeth the Earth upon the waters nothing sustaining it."

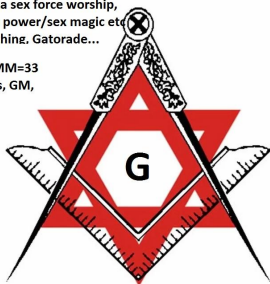
It is not that He "hangeth the Earth upon nothing," but "hangeth or layeth it upon the waters" which were empty or waste, and where before there was nothing. This is in strict accordance with the other expressions, that "the Earth was founded upon the waters," &c., and also with the expression in Genesis, "that the face of the deep was covered only with darkness."

If the Earth were a globe, it is evident that everywhere the water of its surface, the seas, lakes, oceans, and rivers, must be sustained by the land, the Earth must be under the water; but if the land and the waters are distinct, and the Earth is "founded upon the seas," then everywhere the sea must sustain the land as it does a ship or any other floating mass, and there is water below the earth. In this particular as in all the others, the scriptures are beautifully sequential and consistent:—



G=7, generation aka sex force worship,
Kunalinga, serpent power/sex magic etc
"nuthin but a "G" thing. Gatorade...

M=13, Mirrored, MM=33
on its side, M&M's, GM,
etc



District of-, British-



Columbia
Sportswear Company

columbia pictures, colombia,
columbia university/journalism etc



this company founded by german jews in oregon btw

Walmart



Exodus xx, 4—"Thou shalt not make unto thee any likeness of anything in heaven above or in the Earth beneath, or in the *waters under the Earth.*"

Genesis xlv, 25—"The Almighty shall bless thee with the blessings of heaven above, and blessings of the *deep that lieth under.*"

Deut. xxxiii, 13—"Blessed be his land, for the precious things of heaven ; for the dew ; and for the *deep which couched beneath.*"

Deut. iv, 18—"Take ye therefore good heed unto yourselves, and make no similitude of anything on the Earth, or the likeness of anything that is in the *waters beneath the Earth.*"

The same idea prevailed among the ancients generally. In Ovid's *Metamorphoses*, Jupiter, in an assembly of the gods, is made to say, "I swear by the infernal *waves which glide under the Earth.*"

If the earth is a distinct structure standing in and upon the waters of the "great deep," it follows that, unless it can be shown that something else sustains the waters, that the depth is fathomless. As there is no evidence whatever of anything existing underneath the "great deep," and as in many parts of the Atlantic and Pacific Oceans no bottom has been found by the most scientific and efficient means which *human ingenuity* could invent, we are forced to the

conclusion that the depth is boundless. This conclusion is again confirmed by the scriptures.

Jeremiah xxxi, 37—"Thus saith the Lord, which giveth the sun for a light by day, and the ordinances of the moon and of the stars for a light by night, which divideth the sea when the waves thereof roar, the Lord of Hosts is His name. If these ordinances depart from before me, saith the Lord, then the seed of Israel also shall cease from being a nation before me for ever. Thus saith the Lord : if heaven above can be measured, and the *foundations* of the *Earth* searched out *beneath*, I will also cast off all the seed of Israel."

From the above it will be seen that God's promises to his people could no more be broken than could the height of heaven, or the depths of the Earth's foundations be searched out. The fathomless deep beneath—upon which the Earth is founded, and the infinitude of heaven above, are here given as emblems of the boundlessness of God's power, and of the certainty that all his ordinances will be fulfilled. When God's power can be limited, heaven above will no longer be infinite ; and the mighty waters, the foundations of the earth may be fathomed. But the scriptures plainly teach us that the power and wisdom of God, the heights of Heaven, and the depths of the waters under the Earth, are

alike unfathomable ; and no true philosophy ever avers, nor ever did nor ever can aver, a single fact to the contrary.

In all the religions of the Earth the words “up” and “above” are associated with a region of peace and happiness. Heaven is always spoken of as *above* the *Earth*. The scriptures invariable convey the same idea :—

Deut. xxvi., 15—“ Look *down* from Thy holy habitation, from Heaven, and bless Thy people Israel.”

Exodus xix., 20—“ And the Lord came *down* upon Mount Sinai ”

Psalms cii., 19—“ For he hath looked *down* from the height of his sanctuary : from Heaven did the Lord behold the Earth.”

Isaiah lxiii., 15—“ Look *down* from Heaven, and behold from the habitation of Thy holiness and of Thy glory.”

Psalms ciii., 11—“ For as the Heaven is high *above the Earth*.”

2 Kings ii., 11—“ And Elijah went *up* by a whirlwind into Heaven.”

Mark xvi., 10—“ So then after the Lord had spoken unto them he was received *up into Heaven*.”

Luke xxiv., 51—“ And it came to pass, while He blessed them, He was parted from them, and carried *up into Heaven*.”

If the Earth is a globe revolving at the rate of above a thousand miles an hour all this language of scripture is necessarily fallacious. The terms "up" and "down," and "above" and "below," are words without meaning, at best are merely relative—indicative of no absolute or certain direction. That which is "up" at noon-day, is directly "down" at midnight. Heaven can only be spoken of as "above," and the scriptures can only be read correctly for a single moment out of the twenty-four hours ; for before the sentence "Heaven is high above the Earth" could be uttered, the speaker would be descending from the meridian where Heaven was above him, and his eye although unmoved would be fixed upon a point millions of miles away from his first position. Hence in all the ceremonials of religion, where the hands and eyes are raised upwards to Heaven, nay when Christ himself "lifted up his eyes to Heaven and said, Father, the hour is come," his gaze would be sweeping along the firmament at rapidly varying angles, and with such incomprehensible velocity that a fixed point of observation, and a definite position, as indicating the seat or throne of "Him that sitteth in the Heavens" would be an impossibility.

Again: the religious world have always believed and meditated upon the word "Heaven" as representing an infinite region of joy and safety, of

rest and happiness unspeakable; as "the place of God's residence, the dwelling place of angels and the blessed; the true palace of God, entirely separated from the impurities and imperfections, the alterations and changes of the lower world; where He reigns in eternal peace * * It is the sacred mansion of light, and joy, and glory.*" But if there is a plurality of worlds, millions upon millions, nay, an "infinity of worlds," if the universe is filled with innumerable systems of burning suns, and rapidly revolving planets, intermingled with rushing comets and whirling satellites, all dashing and sweeping through space in directions, and with velocities surpassing all human comprehension, and terrible even to contemplate, where is the place of rest and safety? Where is the true and unchangeable "palace of God?" In what direction is Heaven to be found? Where is the liberated human soul to find its home—its refuge from change and motion, from uncertainty and danger? Is it to wander for ever in a labyrinth of rolling worlds? To struggle for ever in a never ending maze of revolving suns and systems? To be never at rest, but for ever seeking to avoid some vortex of attraction—some whirlpool of gravitation? The belief in the existence of Heaven, as a region of peace and harmony

* Cruden's Concordance, article "Heaven."

“extending (above the Earth) through all extent,” and beyond the influence of natural laws and restless elements, is jeopardised, if not destroyed, by a false and usurping astronomy, which has no better foundation than human conceit and presumption. If this ill-founded, unsupported philosophy is admitted by the religious mind, it can no longer say that—

“Far above the sun, and stars, and skies,
In realms of endless light and love,
My Father’s mansion lies.”

The modern theoretical astronomy affirms that the Moon is a solid opaque, non-luminous body ; that it is, in fact, nothing less than a material world. It has even been mapped out into continents, islands, seas, lakes, volcanoes, &c., &c. The nature of its atmosphere and character of its productions and possible inhabitants have been diseussed with as much freedom as though our philosophers were quite as familiar with it as they are with the different objects and localities upon Earth. The light, too, with which the Moon so beautifully illuminates the firmament is declared to be only borrowed—to be only the light of the Sun intercepted and reflected upon the Earth. These doctrines are not only opposed by a formidable array of well-ascertained facts (as given in previous sections), but they are totally denied by the scriptures. The Sun and

Moon and Stars are never referred to as worlds, but simply as *lights* to rule alternately in the firmament.

Genesis i., 14, 16—"And God said let there be *lights* in the firmament of the Heaven to divide the day from the night. * * * And God made two *great lights*—the greater light to rule the day, and the lesser light to rule the night.

Psalms cxxxvi., 7, 9—"O give thanks to Him that made *great lights*: the Sun to rule by day, the Moon and Stars to rule by night."

Jeremiah, xxxi., 35—"The Sun is given for a light by day, and the ordinances of the Moon and of the Stars for a light by night."

Ezekiel, xxxii., 7, 8—"I will cover the Sun with a cloud; and the Moon shall not give *her light*." "All the bright lights of Heaven will I make dark over thee."

Psalms cxlviii., 3—"Praise him Sun and Moon, praise him all ye Stars of light."

Isaiah xiii., 10—"The Sun shall be darkened in his going forth, and the Moon shall not cause *her light* to shine."

Matthew xxiv., 29—"Immediately after the tribulation of those days shall the Sun be darkened, and the Moon shall not give *her light*."

Isaiah ix., 19, 20—"The Sun shall be no more *thy light* by day; neither for brightness shall

the *Moon give light* unto thee. * * Thy Sun shall no more go down ; neither shall thy Moon withdraw itself."

Psalms cxxxvi., 7 to 9—"To him that made great lights, the Sun to rule by day, the Moon and Stars to rule by night."

Job xxv., 5—"Behold even to the Moon, and it shineth not."

Ecclesiastes xii., 2—"While the Sun, or the light, or the Moon, or the Stars be not darkened."

Isaiah xxx., 26—"The light of the Moon shall be as the light of the Sun ; and the light of the Sun shall be sevenfold."

Deuteronomy xxxiii., 14—"And for the precious fruits brought forth by the Sun, and for the precious things put forth by the Moon."

In the very first of the passages above quoted the doctrine is enunciated that various distinct and independent *lights* were created. But that two *great* lights were specially called into existence for the purpose of ruling the day and the night. The Sun and the Moon are declared to be these great and alternately ruling lights. Nothing is here said, nor is it in any other part of scripture said, that the Sun is a great light, and that the Moon shines only by reflection. The Sun is called the "greater light to rule the day," and the Moon the "lesser light to rule the night." Although of these two "great lights" one is

less than the other, each is declared to shine with its own light. Hence in Deuteronomy, c. 33, v. 14, it is affirmed that certain fruits are specially brought forth by the influence of the Sun's light, and that certain other productions are "put forth by the Moon." That the light of the sun is influential in encouraging the growth of certain natural products ; and that the light of the Moon has a distinct influence in promoting the increase of certain other natural substances, is a matter well known to those who are familiar with horticultural and agricultural phenomena ; and it is abundantly proved by chemical evidence that the two lights are distinct in character and in action upon various elements. This distinction is beautifully preserved throughout the sacred scriptures. In no single instance are the two lights confounded. On the contrary, in the New Testament, St. Paul affirms with authority, that "there is one glory of the Sun, and another glory of the Moon, and another glory of the Stars."

The same fact of the difference in the two lights, and their independence of each other is maintained in the scriptures to the last. "The Sun became black as sackcloth of hair, and the Moon became as blood." If the Moon is only a reflector, the moment the Sun becomes black *her surface* will be blackened also, and not remain

as blood, while the Sun is dark and black as sackcloth of hair !

Again : the modern system of astronomy teaches that this earth cannot possibly receive light from the Stars, because of their supposed great distance from it : that the fixed Stars are only burning spheres, or Sun's to their own systems of planets and satellites : and that their light terminates, or no longer produces an active luminosity at the distance of nearly two thousand millions of miles. Here again the scriptures affirm the contrary doctrine.

Genesis i., 16—17—“ He made the Stars also ; and God set them in the firmament *to give light upon the earth.*”

Isaiah xiii., 10—“ For the Stars of Heaven and the constellations thereof shall not *give their light.*”

Ezekiel xxxii., 7—“ I will cover the Heaven, and make the *Stars* thereof *dark.*”

Joel ii., 10—“ The Sun and the Moon shall be dark, and the *Stars* shall withdraw *their shining.*”

Psalms cxlviii., 3—“ Praise him Sun and Moon : promise him all ye *Stars of Light.*”

Jeremiah xxxi., 35—“ Thus saith the Lord, which giveth the Sun for a light by day ; and the ordinances of the Moon and of *the Stars* for a *light by night.*”

Daniel xii, 3—"They that turn many to righteousness shall *shine* as the *Stars* for ever and ever."

These quotations place it beyond doubt that the Stars were made expressly to shine in the firmament, and "to give light upon the Earth." In addition to this language of scripture, we have the evidence of our own eyes that the Stars give abundant light. "What beautiful star-light!" is a common expression: and we all remember the difference between a dark and starless night, and one when the firmament is as it were studded with brilliant luminaries. Travellers inform us that in many parts of the world, where the sky is clear and free from clouds and vapours for weeks together, the Stars appear both larger and brighter than they do in England; and that their light is sufficiently intense to enable them to read and write, and to travel with safety through the most dangerous places.

If it be true that the Stars and the Planets are not simply lights, as the scriptures affirm them to be, but magnificent worlds, for the most part much larger than this earth, then it is a very proper question to ask—"are they inhabited?" If the answer be in the affirmative, it is equally proper to inquire "have the first parents in each world been tempted?" If so, "have they

fallen?" if so, "Have they required redemption?" And "have they been redeemed?" "Has each world had a separate Redeemer? or has Christ been the Redeemer for every world in the universe?" And if so, "did His suffering and crucifixion on this Earth suffice for the redemption of the fallen inhabitants of all other worlds? Or had He to suffer and die in each world successively? Did the fall of Adam in this world involve in his guilt the inhabitants of all other worlds? Or was the baneful influence of Satan confined to the first parents of this Earth? If so, why so? and if not, why not? But, and if, and why, and again—but it is useless thus to ponder! The Christian philosopher must be confounded! If his religion be to him a living reality, he will turn with loathing or spurn with indignation and disgust, as he would a poisonous reptile, a system of astronomy which creates in his mind so much confusion and uncertainty! But as the system which necessitates such doubts and difficulties has been shown to be purely theoretical; and to have not the slightest foundation in fact, the religious mind has really no cause for apprehension. Not a shadow of doubt remains that this World is the only one created; that the sacred Scriptures contain, in addition to religious and moral doctrines, a true and consistent philosophy; that they were written for

the good of mankind, at the direct instigation of God himself; and that all their teachings and promises are truthful, consistent, and reliable. Whoever holds the contrary conclusion is the victim of an arrogant false astronomy, of an equally false and presumptuous geology, or a suicidal method of reasoning—a logic which never demands a proof of its premises, and which therefore leads to conclusions which are contrary to nature, to human experience, and to the direct teaching of God's word, and therefore contrary to the deepest and most lasting interests of humanity. "God has spoken to man in two voices, the voice of inspiration and the voice of nature. By man's ignorance they have been made to disagree; but the time will come, and cannot be far distant, when these two languages will strictly accord; when the science of nature will no longer contradict the science of scripture."*

CUI BONO.—"Of all terrors to the generous soul, that *Cui bono* is the one to be the most zealously avoided. Whether it be proposed to find the magnetic point, or a passage impossible to be utilised if discovered, or a race of men of no good to any human institution extant, and of no good to themselves; or to seek the Unicorn in Madagascar, and when we had found him not

* Professor Hunt.

to be able to make use of him ; or the great central plateau of Australia, where no one could live for centuries to come ; or the great African lake, which, for all the good it would do us English folk might as well be in the Moon ; or the source of the Nile, the triumphant discovery of which would neither lower the rents nor take off the taxes anywhere—whatever it is, the *Cui bono* is always a weak and cowardly argument : essentially short-sighted too, seeing that, according to the law of the past, by which we may always safely predicate the future, so much falls into the hands of the seeker, for which he was not looking, and of which he never even knew the existence. The area of the possible is very wide still, and very insignificant and minute, the angle we have staked out and marked impossible. What do we know of the powers which nature has yet in reserve, of the secrets she has still untold, the wealth still concealed ? Every day sees new discoveries in the sciences we can investigate at home. What, then, may not lie waiting for the explorers abroad ? Weak and short-sighted commercially, the *cui bono* is worse than both, morally. When we remember the powerful manhood, the patience, unselfishness, courage, devotion, and nobleness of aim which must accompany a perilous enterprise, and which form so great an example, and so heart-stirring

to the young and to the wavering, it is no return to barbaric indifference to life to say, better indeed a few deaths for even a commercially useless enterprise—better a few hearths made desolate, and a few wives and mothers left to bear their stately sorrow to the end of time, that the future may rejoice and be strong : better a thousand failures, and a thousand useless undertakings, than the loss of national manhood or the weakening of the national fibre. Quixotism is a folly when the energy which might have achieved conquests over misery and wrong, if rightfully applied, is wasted in fighting windmills ; but to forego any great enterprise for fear of the dangers attending, or to check a grand endeavour by the *cui bono* of ignorance and moral scepticism, is worse than a folly—it is baseness, and a cowardice.*”

The above quotation is an excellent general answer to all those who may, in reference to the subject of this work, or to anything which is not of immediate worldly interest, obtrude the *cui bono* ? But as a special reply it may be claimed for the subject of these pages—

First,—It is more edifying, more satisfactory, and in every sense far better that we should know the true and detect the false. Thereby the mind becomes fixed, established upon an eternal

* *Daily News* of April 5, 1865.

foundation, and no longer subject to those waverings and changes, those oscillations and fluctuations which are ever the result of falsehood. To know the truth and to embody it in our lives and purposes our progress must be safe and rapid, and almost unlimited in extent. None can say to what it may lead or where it may culminate. Who shall dare to set bounds to the capabilities of the mind, or to fix a limit to human progress? Whatever may be the destiny of the human race truth alone will help and secure its realisation.

Second,—Having detected the fundamental falsehoods of modern astronomy, and discovered that the Earth is a plane, and motionless, and the only material world in existence, we are able to demonstrate the actual character of the Universe. In doing this we are enabled to prove that all the so-called arguments with which so many scientific but irreligious men have assailed the scriptures, are absolutely false; have no foundation except in their own astronomical and geological theories, which being demonstrably fallacious, they fall to the ground as valueless. They can no longer be wielded as weapons against religion. If used at all it can only be that their weakness and utter worthlessness will be exposed. Atheism and every other form of Infidelity are thus rendered helpless. Their sting is cut away,

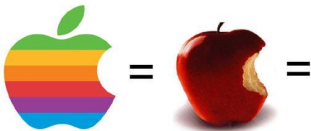
and their poison dissipated. The irreligious philosopher can no longer obtrude his theories as things proved wherewith to test the teachings of scripture. He must now himself be tested. He must be forced to demonstrate his premises, a thing which he has never yet attempted ; and if he fails in this respect his impious vanity, self-conceit, and utter disregard of justice, will become so clearly apparent that his presence in the ranks of science will no longer be tolerated. All theory must be put aside, and the questions at issue must be decided by independent and practical evidence. This has been done. The process—the *modus operandi*, and the conclusions derived therefrom have been given in the early sections of this work. They are entirely consonant with the teachings of scripture. The scriptures are therefore literally true, and must henceforth either alone or in conjunction with practical science be used as a standard by which to test the truth or falsehood of every system which does or may hereafter exist. Philosophy is no longer to be employed as a test of scriptural truth, but the scriptures may and ought to be the test of all philosophy. Not that they are to be used as a test of philosophy simply because they are *thought* or *believed* to be the word of God, but because their literal teachings in regard to science and natural phenomena, are demon-

strably correct. It is quite as faulty and unjust for the religious devotee to urge the scriptures against the theories of the philosopher simply because he *believes* them to be true, as it is for the philosopher to urge his theories against the scriptures only because he disbelieves the one and believes the other. The whole matter must be taken out of the region of belief and disbelief. The Christian will be strengthened and his mind more completely satisfied by having it in his power to demonstrate that the scriptures are philosophically true, than he could possibly be by the simple belief in their validity, unsupported by practical evidence. On the other hand the Atheist who is met by the Christian upon purely scientific grounds, and who is not belaboured with enunciations of what his antagonist believes, will be led to listen and to pay more regard and respect to the reasons advanced than he could possibly concede to the purely religious argument, or to an argument founded upon faith alone. If it can be shown to the atheistical philosopher that his astronomical and geological theories are fallacious, and that all the expressions in the scriptures which have reference to natural phenomena are literally true, he will of necessity be led to admit that, apart from all other considerations, if the *philosophy* of the scriptures is demonstrably correct, then possibly

their *spiritual* and *moral* teachings may also be true ; and if so, they may and indeed must have had a divine origin ; and if so they are truly the “ word of God,” and after all, religion is a grand reality ; and the theories which speculative adventurous philosophers have advanced are nothing better than treacherous quicksands into which many ‘of the deepest thinkers have been engulfed and lost. By this process many highly intelligent minds have been led to desert the ranks of Atheism and to rejoin the army of Christian soldiers and devotees. Many have rejoiced almost beyond expression that the subject of the Earth’s true form and position in the universe had ever been brought under their notice ; and doubtless great numbers will yet be induced to return to that allegiance which plain demonstrable truth demands and deserves. To induce numbers of earnest thinking human beings to leave the rebellious cause of Atheism and false philosophy ; to return to a full recognition of the beauty and truthfulness of the scriptures, and to a participation in the joy and satisfaction which religion can alone supply, is a grand and cheering result, and one which furnishes the noblest possible answer to the ever ready “ CUI BONO.”

In addition to the numerous quotations which *have* been given from the sacred scriptures, and

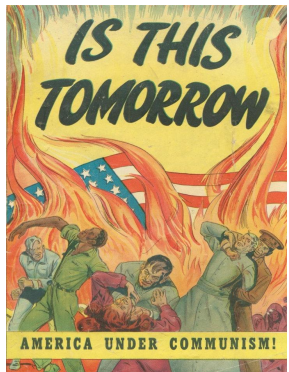
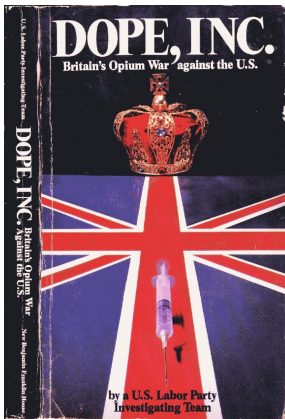
proved to be true and consistent, it may be useful briefly to refer to the following difficulties which have been raised by the scientific objectors to scriptural authority :—" As the earth is a globe, and as all its vast collections of water—its oceans, lakes, &c., are sustained by the earthy crust beneath them, and as beneath this 'crust of the earth' everything is in a red-hot molten condition to what place could the excess of waters retire which are said in the scriptures to have overwhelmed the whole world? It could not sink into the centre of the earth, for the fire is there so intense that the whole would be rapidly volatilised, and driven away as vapour. It could not evaporate, for when the atmosphere is charged with watery vapour beyond a certain degree it begins to condense and throw back the water in the form of rain ; so that the waters of the flood could not sink from the earth's surface, nor remain in the atmosphere ; therefore if the earth had ever been deluged at all, it would have remained so to this day. But as it is not universally flooded so it never could have been, and the account given in the scriptures is false." All this specious reasoning is founded upon the assumption that the earth is a globe : this doctrine, however, being false, all the difficulties quickly vanish. The earth being "founded on the seas" would be as readily cleared of its super-



also rainbow colors mocks symbol for God from OT. This is deliberate. Also Josephs coat mocking as well.



knowledge of good and evil



fluous water as would the deck of a ship on emerging from a storm. Or as a rock in the ocean would be cleared after the raging waves which for a time overwhelmed it had subsided.

“Thou coveredst the Earth with the deep as with a garment; the waters stood above the mountains. At thy rebuke they fled; and at the voice of thy thunder they hasted away. . . . down by the valleys unto the place which thou hast founded for them.”*

“Thou didst cleave the Earth with rivers; and the overflowing of the waters passed by; and the deep uttered his voice and lifted up his hands on high.”†

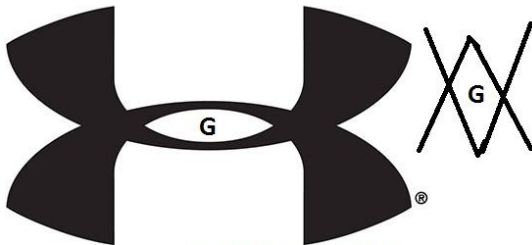
The surface of the Earth standing above the level of the surrounding seas, the waters of the flood would simply and naturally run down by the valleys and rivers into the “great deep,”—into which “the waters returned from off the earth continually . . . until the tenth month, and on the first day of the month were the tops of the mountains seen.”‡

Again; as the Earth is a Globe and in continual motion, how could Jesus on being “taken up into an exceedingly high mountain see all the kingdoms of the world, in a moment of time?” Or, when “He cometh with clouds and every eye shall see him,” how could it be pos-

* *Psalm civ.* † *Hab. iii. 9 10.* ‡ *Gen. viii. 2-5.*

sible, seeing that at least twenty-four hours would elapse before every part of the Earth would be turned to the same point? But it has been demonstrated that the Earth is a Plane and motionless, and that from a great eminence every part of its surface could be seen at once; and, at once—at the same moment, could every eye behold Him, when “coming in a cloud with power and great glory.”

FINIS.



JUDAEO-MASONIC
UNDER / ARMOUR®

PERSPECTIVE
 IS NOT
 CURVATURE



Bank of America

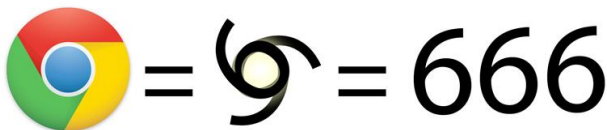


BLUE LODGE MASONS 1-3, outer court

RED LODGE Masons 4+ also hidden higher level ones from dupe
 masons. 13=Royal Arch 18=Rosicrucian etc

Blue pill or Red Pill?,

Red/White/Blue Masonic colors Satanic Judaeo-Masonic French
 Revolution





BEL/BAAL(Bel Air, etc)

Lizard Eye

LIVE MÁS™

EVIL

SAM(son of)

The Permanent Instruction of the Alta Vendita

This little booklet examines *The Permanent Instruction of the Alta Vendita*—the once secret papers of the Masons which outline a plan to subvert the Catholic Church. The author quotes the actual Masonic document, which both Pope Pius IX (1846-1878) and Pope Leo XIII (1878-1903) asked to be published. This document describes the Masons' diabolical strategy to destroy the Church by infecting her leaders with Liberal ideas. In this way, Catholics would be promulgating Masonic ideals under the mantle of seemingly legitimate Catholicism. The book describes how far the plot has succeeded, and it includes an appendix detailing the aims of Freemasonry, as well as Leo XIII's denunciation of that society. It also contains the famous *Oath Against Modernism* required by Pope St. Pius X of all clergy, plus an official prayer for the conversion of Freemasons. This dynamic little booklet gives the reader an awareness of the dangers posed by Freemasonry and will expose the truth about the secret aims of this powerful secret organization.



TAN

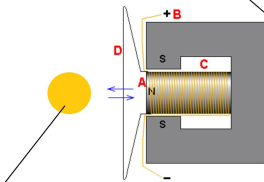
The Permanent Instruction of the Alta Vendita

JOHN VENNARI

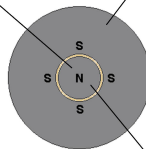


A Masonic Blueprint for the Subversion of The Catholic Church

Sun moves radially between the tropic of capricorn/cancer circular latitudes. Perspective and vision limits make it appear as setting/rising.



Antarctic Ice Barrier Plateau



Flat Earth Dart Board with oceans and land crust on top. Centered radially from North Star and North Pole

Sun radiates magnetic force which is captured by conductive salt water oceans that move creating an electromagnet effect. The gaps are where the underwater and under-ice geothermal vents/lakes are and focused electrical force creates heat. Volcanoes created and regulated by this. Tides are created by the regular movement of water in the extreme depths/vents local to a particular tidal profile also effected by local geometry.

A Challenge to the JOHNS HOPKINS University

ONE HUNDRED PROOFS THAT **THE EARTH** IS **NOT A GLOBE.**

Dedicated to RICHARD A. PROCTOR, Esq.

"The Greatest Astronomer of the Age."

By WM. CARPENTER,

Referee for John Hampden, Esq., in the Celebrated Scientific Wager, in 1870;

Author of 'Common Sense' on Astronomy, (London, 1866;) Proctor's

Planet Earth; Wallace's Wonderful Water; The

Delusion of the Day, &c., &c.

"UPRIGHT, DOWNRIGHT, STRAIGHTFORWARD."

BALTIMORE:

PRINTED AND PUBLISHED BY THE AUTHOR,

No. 71 Chew Street.

1885.

TWENTY-FIVE CENTS. 100 Copies, Postage Paid.

Dollar.

5th Edition. 6th

INDEX.

- 1 The aeronaut sees for himself.
- 2 Standing water-level.
- 3 Surveyors' "allowance."
- 4 Flow of Rivers—the Nile.
- 5 Lighthouses—Cape Hatteras.
- 6 The sea-shore.—"Coming up."
- 7 A trip down Chesapeake Bay.
- 8 The model globe useless.
- 9 The sailor's level charts.
- 10 The mariners' compass.
- 11 The southern circumference.
- 12 Circumnavigation of the Earth.
- 13 Meridians are straight lines.
- 14 Parallels of latitude—circles.
- 15 Sailing down and underneath.
- 16 Distance round the South.
- 17 Levelness required by man.
- 18 The "level" of the astronomers.
- 19 Half the globe is cut off, now.
- 20 No "up" or "down" in nature?
- 21 The "spherical loadstone."
- 22 No falsehoods wanted!
- 23 I o proof of "rotundity."
- 24 A "most complete" failure.
- 25 The first Atlantic Cable.
- 26 Earth's "curvature."
- 27 Which end goes down?
- 28 A "hill of water."
- 29 Characteristics of a globe.
- 30 Horizon—level with the eye.
- 31 Much too small a globe.
- 32 Vanishing point of objects.
- 33 We are not "fastened on."
- 34 Our "antipodes."—a delusion.
- 35 Horizon a level line.
- 36 Chesapeake Bay by night.
- 37 Six months day and night.
- 38 The "Midnight Sun."
- 39 Sun moves round the Earth.
- 40 Suez Canal—100 miles—level.
- 41 The "true level."—a curve.
- 42 Projectiles—firing east or west.
- 43 Bodies thrown upwards.
- 44 Firing in opposite direction.
- 45 Astronomer Royal of England.
- 46 An utterly meaningless theory.
- 47 Professor Proctor's cylinder.
- 48 Proctor's false perspective.
- 49 Motion of the clouds.
- 50 Scriptural proof—a plane.
- 51 The "Standing Order."
- 52 More ice in the south.
- 53 Sun's accelerated pace, south.
- 54 Balloons not left behind.
- 55 The Moon's beams are cold.
- 56 The Sun and Moon.
- 57 Not Earth's shadow at all.
- 58 Rotating and revolving.
- 59 Proctor's big mistake.
- 60 Sun's distance from Earth.
- 61 No true "measuring-rod."
- 62 Sailing "round" a thing.
- 63 Telescopes—"hill of water."
- 64 The laws of optics—Glaish.
- 65 "Dwelling" upon error.
- 66 Ptolemy's predictions.
- 67 Canal in China—700 miles.
- 68 Mr. Lockyer's false logic.
- 69 Beggarly alternatives.
- 70 Mr. Lockyer's suppositions.
- 71 North Star seen from S. lat.
- 72 "Walls not parallel!"
- 73 Pendulum experiments.
- 74 "Delightful uncertainty."
- 75 Outrageous calculations.
- 76 J. R. Young's Navigation.
- 77 "Tumbling over."
- 78 Circumnavigation—south.
- 79 A disc—not a sphere.
- 80 Earth's "motion" unproven.
- 81 Moon's motion east to west.
- 82 All on the wrong track.
- 83 No meridional "degrees."
- 84 Depression of North Star.
- 85 Rivers flowing up-hill?
- 86 100 miles in five seconds.
- 87 Miserable makeshifts.
- 88 What holds the people.
- 89 Luminous objects.
- 90 Practice against theory.
- 91 Unscientific classification.
- 92 G. B. Airy's "suppositions."
- 93 Astronomers give up theory.
- 94 School-room "proofs" false.
- 95 Pictorial proof—Earth a plane.
- 96 Laws of perspective ignored.
- 97 "Rational suppositions."
- 98 It is the star that moves.
- 99 Hair-splitting calculation.
- 100 How "time" is lost or gained.

ONE HUNDRED PROOFS

THAT

THE EARTH

IS

NOT A GLOBE.

Dedicated to R. A. PROCTOR, Esq.

BY WM. CARPENTER.

UPRIGHT, DOWNRIGHT, STRAIGHTFORWARD."

[COPYRIGHT SECURED.]



BALTIMORE:

PRINTED AND PUBLISHED BY THE AUTHOR,

No. 71 Chew Street.

1885

INTRODUCTION.

Q B 638
C 3 1880

"PARALLAX," the Founder of the Zetetic Philosophy, is dead; and it now becomes the duty of those, especially, who knew him personally and who labored with him in the cause of Truth against Error, to begin, anew, the work which is left in their hands. Dr. Samuel B. Rowbotham finished his earthly labours, in England, the country of his birth, December 23, 1884, at the age of 89. He was, certainly, one of the most gifted of men: and though his labours as a public lecturer were confined within the limits of the British Islands his published work is known all over the world and is destined to live and be republished when books on the now popular system of philosophy will be considered in no other light than as bundles of waste paper. For several years did "Parallax" spread a knowledge of the facts which form the basis of his system without the slightest recognition from the newspaper press until, in January, 1889, the people were informed by the "Wilts Independent" that lectures had been delivered by "a gentleman adopting the name of 'Parallax,' to prove modern astronomy unreasonable and contradictory," that "great skill" was shown by the lecturer, and that he proved himself to be "thoroughly acquainted with the subject in all its bearings." Such was the beginning—the end will not be so easily described. The Truth will always find advocates—men who care not a snap of their fingers for the mere opinion of the world, whatever form it may take, whilst they know that they are the masters of the situation and that Reason is King! In 1867, "Parallax" was described as "a paragon of courtesy, good temper, and masterly skill in debate." The author of the following hastily-gotten-up pages is proud of having spent many a pleasant hour in the company of Samuel Birley Rowbotham.

A complete sketch of the "Zetetic Philosophy" is impossible in a small pamphlet; and many things necessarily remain unsaid which, perhaps, should have been touched upon, but which would to some extent have interfered with the plan laid down—the bringing together, in a concise form, "One Hundred Proofs that the Earth is not a Globe." Much may be gathered, indirectly, from the arguments in these pages, as to the real nature of the Earth on which we live and of the heavenly bodies which were created for us. The reader is requested to be patient in this matter and not expect a whole flood of light to burst in upon him at once, through the dense clouds of opposition and prejudice which hang all around. Old ideas have to be gotten rid of, by some people, before they can entertain the new; and this will especially be the case in the matter of the Sun, about which we are taught, by Mr. Proctor, as follows: "The globe of the Sun is so much larger than that of the Earth that no less than 1,250,000 globes as large as the Earth would be wanted to make up together a globe as large as the Sun." Whereas, we know that, as it is demonstrated that the Sun moves round over the Earth, its size is proportionately less. We can then easily understand that Day and Night, and the Seasons are brought about by his daily circuits round in a course concentric with the North, diminishing in their extent to the end of June, and increasing until the end of December, the equatorial region being the area covered by the Sun's mean motion. If, then, these pages serve but to arouse the spirit of enquiry, the author will be satisfied. The right hand of fellowship in this good work is extended, in turn, to Mr. J. Lindgren, 90 South First Street, Brooklyn, E. D., N. Y., Mr. M. C. Flanders, lecturer, Kendall, Orleans County, N. Y., and to Mr. John Hampden, editor of "Parallax" (a new journal), Cosmos House, Balham, Surrey, England.

ONE HUNDRED PROOFS

THAT

EARTH IS NOT A GLOBE.

IF man uses the senses which God has given him, he gains knowledge; if he uses them not, he remains ignorant. Mr. R. A. Proctor, who has been called "the greatest astronomer of the age," says: "The Earth on which we live and move seems to be flat." Now, he does not mean that it seems to be flat to the man who shuts his eyes in the face of nature, or, who is not in the full possession of his senses: no, but to the average, common sense, wide-awake, thinking man. He continues: "that is, though there are hills and valleys on its surface, yet it seems to extend on all sides in one and the same general level." Again, he says: "There seems nothing to prevent us from travelling as far as we please in any direction towards the circle all round us, called the *horizon*, where the sky seems to meet the level of the Earth." "The level of the Earth!" Mr. Proctor knows right well what he is talking about, for the book from which we take his words, "Lessons in Elementary Astronomy," was written, he tells us, "to guard the beginner against the captious objections which have from time to time been urged against accepted astronomical theories." The things which are to be defended, then, are these "accepted astronomical theories!" It is not truth that is to be defended against the assaults of error—Oh, no: simply "theories," right or wrong, because they have been "accepted!" Accepted! Why, they have been accepted because it was not thought to be worth while to look at them. Sir John Herschel says: "We shall take for granted, from the outset, the Copernican system of the world." He did not care whether it was the right system or a wrong one, or he would not have done that: he would have looked into it. But, forsooth, the theories are accepted, and, of course, the men who have accepted them are the men who will naturally defend them if they can. So, Richard A. Proctor tries his hand; and we shall see how it fails him. His book was published without any date to it at all. But there is internal evidence which will fix that matter closely enough. We read of the carrying out of the experiments of the celebrated scientist, Alfred R. Wallace, to prove the "convexity" of the surface of standing water, which experiments were conducted in March, 1870, for the purpose of winning Five Hundred Pounds from John Hampden, Esq., of Swindon, England, who had wagered that sum upon the conviction that the said surface is always a level one. Mr. Proctor says: "The experiment was lately tried in a very amusing way." In or about the year 1870, then, Mr. Proctor wrote his book; and, instead of being ignorant of the details of the experiment, he knew all about them. And whether the "amusing" part of the business was the fact that Mr. Wallace

wrongfully claimed the five-hundred pounds and got it, or that Mr. Hampden was the victim of the false claim, it is hard to say. The "way" in which the experiment was carried out is, to all intents and purposes, just the way in which Mr. Proctor states that it "can be tried." He says, however, that the distance involved in the experiment "should be three or four miles." Now, Mr. Wallace took up six miles in his experiment, and was unable to prove that there is any "curvature," though he claimed the money and got it; surely it would be "amusing" for anyone to expect to be able to show the "curvature of the earth" in three or four miles, as Mr. Proctor suggests! Nay, it is ridiculous. But "the greatest astronomer of the age" says the thing can be done! And he gives a diagram: "Showing how the roundness of the Earth can be proved by means of three boats on a large sheet of water." (Three or four miles.) But, though the accepted astronomical theories be scattered to the winds, we charge Mr. Proctor either that he has never made the experiment with the three boats, or, that, if he has, the experiment did NOT prove what he says it will. Accepted theories, indeed! Are they to be bolstered up with absurdity and falsehood? Why, if it were possible to show the two ends of a four-mile stretch of water to be on a level, with the centre portion of that water bulged up, the surface of the Earth would be a series of four-mile curves!

But Mr. Proctor says: "We can set three boats in a line on the water, as at A, B, and C, (Fig. 7). Then, if equal masts are placed in these boats, and we place a telescope, as shown, so that when we look through it we see the tops of the masts of A and C, we find the top of the mast B is above the line of sight." Now, here is the point: Mr. Proctor either knows or he ought to know that we shall NOT find anything of the sort! If he has ever tried the experiment, he knows that the three masts will range in a straight line, just as common sense tells us they will. If he has not tried the experiment, he should have tried it, or have paid attention to the details of experiments by those who have tried similar ones a score of times and again. Mr. Proctor may take either horn of the dilemma he pleases: he is just as wrong as a man can be, either way. He mentions no names, but he says: "A person had written a book, in which he said that he had tried such an experiment as the above, and had found that the surface of the water was *not* curved." That person was "PARALLAX," the founder of the Zetetic Philosophy. He continues: "Another person seems to have believed the first, and became so certain that the Earth is flat as to wager a large sum of money that if three boats were placed as in Fig. 7, the middle one would not be above the line joining the two others." That person was John Hampden. And, says Mr. Proctor, "Unfortunately for him, some one who had more sense agreed to take his wager, and, of course, won his money." Now, the "some one who had more sense" was Mr. Wallace. And, says Proctor, in continuation: "He [Hampden?] was rather angry; and it is a strange thing that he was not angry with himself for being so foolish, or with the person who said he had tried the experiment (and so led him astray), but with the person who had won his money!" Here, then, we see that Mr. Proctor knows better than to say that the experiments con-

ducted by "PARALLAX" were things of the imagination only, or that a wrong account had been given of them; and it would be well if he knew better than to try to make his readers believe that either one or the other of these things is the fact. But, there is the Old Bedford Canal now; and there are ten thousand places where the experiment may be tried! Who, then, are the "foolish" people: those who "believe" the record of experiments made by searchers after Truth, or those who shut their eyes to them, throw a doubt upon the record, charge the conductors of the experiments with dishonesty, never conduct similar experiments themselves, and declare the result of such experiments to be so and so, when the declaration can be proved to be false by any man, with a telescope, in twenty-four hours?

Mr. Proctor:—The sphericity of the Earth CANNOT be proved in the way in which you tell us it "can" be! We tell you to take back your words and remodel them on the basis of Truth. Such careless misrepresentations of facts are a disgrace to science—they are the disgrace of theoretical science to-day! Mr. Blackie, in his work on "Self Culture," says: "All flimsy, shallow, and superficial work, in fact, is a lie, of which a man ought to be ashamed."

That the Earth is an extended plane, stretched out in all directions away from the central North, over which hangs, for ever, the North Star, is a fact which all the falsehoods that can be brought to bear upon it with their dead weight will never overthrow: it is God's Truth the face of which, however, man has the power to smirch on over with his unclean hands. Mr. Proctor says: "We learn from astronomy that all these ideas, natural though they seem, are mistaken." Man's natural ideas and conclusions and experimental results are, then, to be overthrown by—what! By "astronomy?" By a thing without a soul—a mere theoretical abstraction, the outcome of the dreamer? Never! The greatest astronomer of the age is not the man, even, who can so much as attempt to manage the business. "We find," says Mr. Proctor, "that the Earth is not flat, but a globe; not fixed, but in very rapid motion; not much larger than the moon, and far smaller than the Sun and the greater number of the stars."

First, then, Mr. Proctor, tell us how you find that the Earth is not flat, but a globe! It does not matter that "we find" it so put down in that conglomeration of suppositions which you seek to defend: the question is, What is the evidence of it?—where can it be obtained? "The Earth on which we live and move seems to be flat," you tell us: where, then, is the mistake? If the Earth seem to be what it is not, how are we to trust our senses? And if it is said that we cannot do so, are we to believe it, and consent to be put down lower than the brutes? No, sir: we challenge you, as we have done many times before, to produce the slightest evidence of the Earth's rotundity, from the world of facts around you. You have given to us the statement we have quoted, and we have the right to demand a proof; and if this is not forthcoming, we have before us the duty of denouncing the absurd dogma as worse than an absurdity—as a FRAUD—and as a fraud that flies in the face of divine revelation! Well, then, Mr. Proctor, in demanding a proof of the Earth's rotundity (or the frank admission of your errors), we are tempted to taunt you as we tell you

that it is utterly out of your power to produce one; and we tell you that you do not dare even to lift up your finger to point us to the so-called proofs in the school-books of the day, for you know the measure of absurdity of which they are composed, and how disgraceful it is to allow them to remain as false guides of the youthful mind!

Mr. Proctor: we charge you that, whilst you teach the theory of the Earth's rotundity and mobility, you know that it is a plane; and here is the ground of the charge. In page 7, in your book, you give a diagram of the "surface on which we live," and the "supposed globe"—the supposed "hollow globe"—of the heavens, arched over the said surface. Now, Mr. Proctor, you picture the surface on which we live in exact accordance with your verbal description. And what is that description? We shall scarcely be believed when we say that we give it just as it stands: "The level of the surface on which we live." And, that there may be no mistake about the meaning of the word "level," we remind you that your diagram proves that the level that you mean is the level of the mechanic, a plane surface, and not the "level" of the astronomer, which is a convex surface! In short, your description of the Earth is exactly what you say it "seems to be," and, yet, what you say it is not: the very aim of your book being to say so! And we call this the prostitution of the printing press. And it is all the evidence that is necessary to bring the charge home to you, since the words and the diagram are in page 7 of your own book. You know, then, that Earth is a Plane—and so do we.

Now for the evidence of this grand fact, that other people may know it as well as you: remembering, from first to last, that you have not dared to bring forward a single item from the mass of evidence which is to be found in the "Zetetic Philosophy," by "Parallax," a work the influence of which it was the avowed object of your own book to crush!—except that of the three boats, an experiment which you have never tried, and the result of which has never been known, by anyone who has tried it, to be as you say it is!

1. The aeronaut can see for himself that Earth is a Plane. The appearance presented to him, even at the highest elevation he has ever attained, is that of a concave surface—this being exactly what is to be expected of a surface that is truly level, since it is the nature of level surfaces to appear to rise to a level with the eye of the observer. This is ocular demonstration and proof that Earth is not a globe.

2. Whenever experiments have been tried on the surface of standing water, this surface has always been found to be level. If the Earth were a globe, the surface of all standing water would be convex. This is an experimental proof that Earth is not a globe.

3. Surveyors' operations in the construction of railroads, tunnels, or canals are conducted without the slightest "allowance" being made for "curvature," although it is taught that this so-called allowance is absolutely necessary! This is a cutting proof that Earth is not a globe.

4. There are rivers that flow for hundreds of miles towards the level of the sea without falling more than a few feet—notably, the Nile, which, in a thousand miles, falls but a foot. A level expanse

of this extent is quite incompatible with the idea of the Earth's "convexity." It is, therefore, a reasonable proof that Earth is not a globe.

5. The lights which are exhibited in lighthouses are seen by navigators at distances at which, according to the scale of the supposed "curvature" given by astronomers, they ought to be many hundreds of feet, in some cases, down below the line of sight! For instance: the light at Cape Hatteras is seen at such a distance (40 miles) that, according to theory, it ought to be nine-hundred feet higher above the level of the sea than it absolutely is, in order to be visible! This is a conclusive proof that there is no "curvature," on the surface of the sea—"the level of the sea,"—ridiculous though it is to be under the necessity of proving it at all: but it is, nevertheless, a conclusive proof that the Earth is not a globe.

6. If we stand on the sands of the sea-shore and watch a ship approach us, we shall find that she will apparently "rise"—to the extent of her own height, nothing more. If we stand upon an eminence, the same law operates still; and it is but the law of perspective, which causes objects, as they approach us, to appear to increase in size until we see them, close to us, the size they are in fact. That there is no other "rise" than the one spoken of is plain from the fact that, no matter how high we ascend above the level of the sea, the horizon rises on and still on as we rise, so that it is always on a level with the eye, though it be two-hundred miles away, as seen by Mr. J. Glaisher, of England, from Mr. Coxwell's balloon. So that a ship five miles away may be imagined to be "coming up" the imaginary downward curve of the Earth's surface, but if we merely ascend a hill such as Federal Hill, Baltimore, we may see twenty-five miles away, on a level with the eye—that is, twenty miles level distance beyond the ship that we vainly imagined to be "rounding the curve," and "coming up!" This is a plain proof that the Earth is not a globe.

7. If we take a trip down the Chesapeake Bay, in the day-time, we may see for ourselves the utter fallacy of the idea that when a vessel appears "hull down," as it is called, it is because the hull is "behind the water:" for, vessels have been seen, and may often be seen again, presenting the appearance spoken of, and away—far away—beyond those vessels, and, at the same moment, the level shore line, with its accompanying complement of tall trees, towering up, in perspective, over the heads of the "hull-down" ships! Since, then, the idea will not stand its ground when the facts rise up against it, and it is a piece of the popular theory, the theory is a contemptible piece of business, and we may easily wring from it a proof that Earth is not a globe.

8. If the Earth were a globe, a small model globe would be the very best—because the truest—thing for the navigator to take to sea with him. But such a thing as that is not known: with such a toy as a guide, the mariner would wreck his ship, of a certainty! This is a proof that Earth is not a globe.

9. As mariners take to sea with them charts constructed as though the sea were a level surface, however these charts may err as to the true form of this level surface taken as a whole, it is clear, as they find them answer their purpose tolerably well—and only tolerably well, for many ships are wrecked owing to the error of which we

speak—that the surface of the sea is as it is taken to be, whether the captain of the ship “supposes” the Earth to be a globe or anything else. Thus, then, we draw, from the common system of “plane sailing,” a practical proof that Earth is not a globe.

10. That the mariners’ compass points north and south at the same time is a fact as indisputable as that two and two makes four; but that this would be impossible if the thing were placed on a globe with “north” and “south” at the centre of opposite hemispheres is a fact that does not figure in the school-books, though very easily seen: and it requires no lengthy train of reasoning to bring out of it a pointed proof that the Earth is not a globe.

11. As the mariners’ compass points north and south at one time, and as the North, to which it is attracted, is that part of the Earth situate where the North Star is in the zenith, it follows that there is no south “point” or “pole” but that, while the centre is North, a vast circumference must be South in its whole extent. This is a proof that the Earth is not a globe.

12. As we have seen that there is, really, no south point (or pole) but an infinity of points forming, together, a vast circumference—the boundary of the known world, with its battlements of icebergs which bid defiance to man’s onward course in a southerly direction—so there can be no east or west “points,” just as there is no “yesterday,” and no “to-morrow.” In fact, as there is one point that is fixed (the North), it is impossible for any other point to be fixed likewise. East and west are, therefore, merely directions at right angles with a north and south line: and as the south point of the compass shifts round to all parts of the circular boundary, (as it may be carried round the central North), so the directions east and west, crossing this line, continued, form a circle, at any latitude. A westerly circumnavigation, therefore, is a going round with the North Star continually on the right hand, and an easterly circumnavigation is performed only when the reverse condition of things is maintained, the North Star being on the left hand as the journey is made. These facts, taken together, form a beautiful proof that the Earth is not a globe.

13. As the mariners’ compass points north and south at one and the same time, and a meridian is a north and south line, it follows that meridians can be no other than straight lines. But, since all meridians on a globe are semicircles, it is an incontrovertible proof that the Earth is not a globe.

14. “Parallels of latitude” only—of all imaginary lines on the surface of the Earth—are circles, which increase, progressively, from the northern centre to the southern circumference. The mariner’s course in the direction of any one of these concentric circles is his longitude, the degrees of which INCREASE to such an extent beyond the equator (going southwards) that hundreds of vessels have been wrecked because of the false idea created by the untruthfulness of the charts and the globular theory together, causing the sailor to be continually getting out of his reckoning. With a map of the Earth in its true form all difficulty is done away with, and ships may be conducted anywhere with perfect safety. This, then, is a very important practical proof that the Earth is not a globe.

15. The idea that, instead of sailing horizontally round the Earth, ships are taken down one side of a globe, then underneath, and are brought up on the other side to get home again, is, except as a mere dream, impossible and absurd! And, since there are neither impossibilities nor absurdities in the simple matter of circumnavigation, it stands, without argument, a proof that the Earth is not a globe.

16. If the Earth were a globe, the distance round its surface at, say, 45 "degrees" south latitude, could not possibly be any greater than it is at the same latitude north; but, since it is found by navigators to be twice the distance—to say the least of it—or, double the distance it ought to be according to the globular theory, it is a proof that the Earth is not a globe.

17. Human beings require a surface on which to live that, in its general character, shall be LEVEL; and since the Omniscient Creator must have been perfectly acquainted with the requirements of His creatures, it follows that, being an All-wise Creator, He has met them thoroughly. This is a theological proof that the Earth is not a globe.

18. The best possessions of man are his senses; and, when he uses them all, he will not be deceived in his survey of nature. It is only when some one faculty or other is neglected or abused that he is deluded. Every man in full command of his senses knows that a level surface is a flat or horizontal one; but astronomers tell us that the true level is the curved surface of a globe! They know that man requires a level surface on which to live, so they give him one in name which is not one in fact! Since this is the best that astronomers, with their theoretical science, can do for their fellow creatures—deceive them—it is clear that things are not as they say they are; and, in short, it is a proof that Earth is not a globe.

19. Every man in his senses goes the most reasonable way to work to do a thing. Now, astronomers (one after another—following a leader), while they are telling us that Earth is a globe, are cutting off the upper half of this supposititious globe in their books, and, in this way, forming the level surface on which they describe man as living and moving! Now, if the Earth were really a globe, this would be just the most unreasonable and suicidal mode of endeavoring to show it. So that, unless theoretical astronomers are all out of their senses together, it is, clearly, a proof that the Earth is not a globe.

20. The common sense of man tells him—if nothing else told him—that there is an "up" and a "down" in nature, even as regards the heavens and the earth; but the theory of modern astronomers necessitates the conclusion that there is not: therefore, the theory of the astronomers is opposed to common sense—yes, and to inspiration—and this is a common sense proof that the Earth is not a globe.

21. Man's experience tells him that he is not constructed like the flies that can live and move upon the ceiling of a room with as much safety as on the floor: and since the modern theory of a planetary earth necessitates a crowd of theories to keep company with it, and one of them is that men are really bound to the earth by a force which fastens them to it "like needles round a spherical loadstone," a

theory perfectly outrageous and opposed to all human experience, it follows that, unless we can trample upon common sense and ignore the teachings of experience, we have an evident proof that the Earth is not a globe.

22. God's Truth never—no, never—requires a falsehood to help it along. Mr. Proctor, in his "Lessons," says: Men "have been able to go round and round the Earth in several directions." Now, in this case, the word "several" will imply more than two, unquestionably: whereas, it is utterly impossible to circumnavigate the Earth in any other than an easterly or a westerly direction; and the fact is perfectly consistent and clear in its relation to Earth as a Plane. Now, since astronomers would not be so foolish as to damage a good cause by misrepresentation, it is presumptive evidence that their cause is a bad one, and—a proof that Earth is not a globe.

23. If astronomical works be searched through and through, there will not be found a single instance of a bold, unhesitating, or manly statement respecting a proof of the Earth's "rotundity." Proctor speaks of "proofs which serve to show . . . that the Earth is not flat," and says that man "finds reason to think that the Earth is not flat," and speaks of certain matters being "explained by supposing" that the Earth is a globe; and says that people have "assured themselves that it is a globe;" but he says, also, that there is a "most complete proof that the Earth is a globe:" just as though anything in the world could possibly be wanted but a proof—a proof that proves and settles the whole question. This, however, all the money in the United States Treasury would not buy; and, unless the astronomers are all so rich that they don't want the cash, it is a sterling proof that the Earth is not a globe.

24. When a man speaks of a "most complete" thing amongst several other things which claim to be what that thing is, it is evident that they must fall short of something which the "most complete" thing possesses. And when it is known that the "most complete" thing is an entire failure, it is plain that the others, all and sundry, are worthless. Proctor's "most complete proof that the Earth is a globe" lies in what he calls "the fact" that distances from place to place agree with calculation. But, since the distance round the Earth at 45 "degrees" south of the equator is twice the distance it would be on a globe, it follows that what the greatest astronomer of the age calls "a fact" is NOT a fact; that his "most complete proof" is a most complete failure; and that he might as well have told us, at once, that he has NO PROOF to give us at all. Now, since, if the Earth be a globe, there would, necessarily, be piles of proofs of it all round us, it follows that when astronomers, with all their ingenuity, are utterly unable to point one out—to say nothing about picking one up—that they give us a proof that Earth is not a globe.

25. The surveyor's plans in relation to the laying of the first Atlantic Telegraph cable, show that in 1665 miles—from Valentia, Ireland, to St. John's, Newfoundland—the surface of the Atlantic Ocean is a LEVEL surface—not the astronomers' "level," either! The authoritative drawings, published at the time, are a standing evidence of the fact, and form a practical proof that Earth is not a globe.

LIBRARY OF POLITICAL SECRETS

1. **The Secret Driving Force Of Communism**
By Maurice Pinay\$2.00
2. **The Soviet Israelite Claw Strangles The Arabs**
By Louis Bielsky\$1.00
3. **What Is Judaism?**
By Itsvan Bakony\$2.00
4. **Chinese Communism And Chinese Jews**
By Itsvan Bakony\$1.00
5. **The Jewish Fifth Column In Islam**
By Itsvan Bakony\$2.00
6. **The Jewish Fifth Column In India**
By Itsvan Bakony\$1.00
7. **Is General Spínola The Kerensky Of Portugal?**
By Alfonso Castelo\$1.00
8. **Jews Want To Dominate The Negroes**
By Itsvan Bakony\$2.00
9. **The Jewish Fifth Column In Japan**
By Itsvan Bakony\$2.00
10. **Jewish Control Over Communist Movements And Governments**
By Itsvan Bakony\$2.00
11. **Paranoiac Judaism**
By Itsvan Bakony\$2.00
12. **Watergate: The Jewish Conspiracy To Seize The US Government**
By E. Aguila\$1.00

A number of the books in the **Political Secrets** series have been translated from the Hungarian of Itsvan Bakony into Spanish and then into English. To insure accuracy the quotes from Hungarian are as literal as possible.

New titles are constantly being added to the **Political Secrets Series**. If you wish to have your name added to our mailing list so you can be notified of new books send to the address below.

CHRISTIAN DEFENSE LEAGUE Box 493 Baton Rouge, La. 70821

26. If the Earth were a globe, it would, if we take Valentia to be the place of departure, curvate downwards, in the 1665 miles across the Atlantic to Newfoundland, according to the astronomers' own tables, more than three-hundred miles; but, as the surface of the Atlantic does not do so—the fact of its levelness having been clearly demonstrated by Telegraph Cable surveyors,—it follows that we have a grand proof that Earth is not a globe.

27. Astronomers, in their consideration of the supposed "curvature" of the Earth, have carefully avoided the taking of that view of the question which—if anything were needed to do so—would show its utter absurdity. It is this:—If, instead of taking our ideal point of departure to be at Valentia, we consider ourselves at St. John's, the 1665 miles of water between us and Valentia would just as well "curvate" downwards as it did in the other case! Now, since the direction in which the Earth is said to "curvate" is interchangeable—depending, indeed, upon the position occupied by a man upon its surface—the thing is utterly absurd; and it follows that the theory is an outrage, and that the Earth does not "curvate" at all:—an evident proof that the Earth is not a globe.

28. Astronomers are in the habit of considering two points on the Earth's surface, without, it seems, any limit as to the distance that lies between them, as being on a level, and the intervening section, even though it be an ocean, as a vast "hill"—of water! The Atlantic ocean, in taking this view of the matter, would form a "hill of water" more than a hundred miles high! The idea is simply monstrous, and could only be entertained by scientists whose whole business is made up of materials of the same description: and it certainly requires no argument to deduce, from such "science" as this, a satisfactory proof that the Earth is not a globe.

29. If the Earth were a globe, it would, unquestionably, have the same general characteristics—no matter its size—as a small globe that may be stood upon the table. As the small globe has top, bottom, and sides, so must also the large one—no matter how large it be. But, as the Earth, which is "supposed" to be a large globe, has no sides or bottom as the small globe has, the conclusion is irresistible that it is a proof that Earth is not a globe.

30. If the Earth were a globe, an observer who should ascend above its surface would have to look downwards at the horizon (if it be possible to conceive of a horizon at all under such circumstances) even as astronomical diagrams indicate—at angles varying from ten to nearly fifty degrees below the "horizontal" line of sight! (It is just as absurd as it would be to be taught that when we look at a man full in the face we are looking down at his feet!) But, as no observer in the clouds, or upon any eminence on the earth, has ever had to do so, it follows that the diagrams spoken of are imaginary and false; that the theory which requires such things to prop it up is equally airy and untrue; and that we have a substantial proof that Earth is not a globe.

31. If the Earth were a globe, it would certainly have to be as large as it is said to be—twenty-five thousand miles in circumference. Now, the thing which is called a "proof" of the Earth's roundness, and which is presented to children at school, is, that if we stand on

the sea-shore we may see the ships, as they approach us, absolutely "coming up," and that, as we are able to see the highest parts of these ships first, it is because the lower parts are "behind the earth's curve." Now, since, if this were the case—that is, if the lower parts of these ships were behind a "hill of water" at all—the size of the Earth, indicated by such a curve as this, would be so small that it would only be big enough to hold the people of a parish, if they could get all round it, instead of the nations of the world, it follows that the idea is preposterous; that the appearance is due to another and to some reasonable cause; and that, instead of being a proof of the globular form of the Earth, it is a proof that Earth is not a globe.

32. It is often said that, if the Earth were flat, we could see all over it! This is the result of ignorance. If we stand on the level surface of a plain or a prairie, and take notice, we shall find that the horizon is formed at about three miles all around us: that is, the ground appears to rise up until, at that distance, it seems on a level with the eye-line or line of sight. Consequently, objects no higher than we stand—say, six feet—and which are at that distance (three miles), have reached the "vanishing point," and are beyond the sphere of our unaided vision. This is the reason why the hull of a ship disappears (in going away from us) before the sails; and, instead of there being about it the faintest shadow of evidence of the Earth's rotundity, it is a clear proof that Earth is not a globe.

33. If the Earth were a globe, people—except those on the top—would, certainly, have to be "fastened" to its surface by some means or other, whether by the "attraction" of astronomers or by some other undiscovered and undiscoverable process! But, as we know that we simply walk on its surface without any other aid than that which is necessary for locomotion on a plane, it follows that we have, herein, a conclusive proof that Earth is not a globe.

34. If the Earth were a globe, there certainly would be—if we could imagine the thing to be peopled all round—"antipodes:" "people who," says the dictionary, "living exactly on the opposite side of the globe to ourselves, have their feet opposite to ours:"—people who are hanging heads downwards whilst we are standing heads up! But, since the theory allows us to travel to those parts of the Earth where the people are said to be heads downwards, and still to fancy ourselves to be heads upwards and our friends whom we have left behind us to be heads downwards, it follows that the whole thing is a myth—a dream—a delusion—and a snare; and, instead of there being any evidence at all in this direction to substantiate the popular theory, it is a plain proof that the Earth is not a globe.

35. If we examine a true picture of the distant horizon, or the thing itself, we shall find that it coincides exactly with a perfectly straight and level line. Now, since there could be nothing of the kind on a globe, and we find it to be the case all over the Earth, it is a proof that the Earth is not a globe.

36. If we take a journey down the Chesapeake Bay, by night, we shall see the "light" exhibited at Sharpe's Island for an hour before the steamer gets to it. We may take up a position on the deck

so that the rail of the vessel's side will be in a line with the "light" and in the line of sight; and we shall find that in the whole journey the light will not vary in the slightest degree in its apparent elevation. But, say that a distance of thirteen miles has been traversed, the astronomers' theory of "curvature" demands a difference (one way or the other!) in the apparent elevation of the light, of 112 feet 8 inches! Since, however, there is not a difference of 112 hair's breadths, we have a plain proof that the water of the Chesapeake Bay is not curved, which is a proof that the Earth is not a globe.

37. If the Earth were a globe, there would, very likely, be (for nobody knows) six months day and six months night at the arctic and antarctic regions, as astronomers dare to assert there is:—for their theory demands it! But, as this fact—the six months day and six months night—is nowhere found but in the arctic regions, it agrees perfectly with everything else that we know about the Earth as a plane, and, whilst it overthrows the "accepted theory," it furnishes a striking proof that Earth is not a globe.

38. When the Sun crosses the equator, in March, and begins to circle round the heavens in north latitude, the inhabitants of high northern latitudes see him skimming round their horizon and forming the break of their long day, in a horizontal course, not disappearing again for six months, as he rises higher and higher in the heavens whilst he makes his twenty-four hour circle until June, when he begins to descend and goes on until he disappears beyond the horizon in September. Thus, in the northern regions, they have that which the traveller calls the "midnight Sun," as he sees that luminary at a time when, in his more southern latitude, it is always midnight. If, then, for one-half the year, we may see for ourselves the Sun making horizontal circles round the heavens, it is presumptive evidence that, for the other half-year, he is doing the same, although beyond the boundary of our vision. This, being a proof that Earth is a plane, is, therefore, a proof that the Earth is not a globe.

39. We have abundance of evidence that the Sun moves daily round and over the Earth in circles concentric with the northern region over which hangs the North Star; but, since the theory of the Earth being a globe is necessarily connected with the theory of its motion round the Sun in a yearly orbit, it falls to the ground when we bring forward the evidence of which we speak, and, in so doing, forms a proof that the Earth is not a globe.

40. The Suez Canal, which joins the Red Sea with the Mediterranean, is about one hundred miles long; it forms a straight and level surface of water from one end to the other; and no "allowance" for any supposed "curvature" was made in its construction. It is a clear proof that the Earth is not a globe.

41. When astronomers assert that it is "necessary" to make "allowance for curvature" in canal construction, it is, of course, in order that, in their idea, a level cutting may be had for the water. How flagrantly, then, do they contradict themselves when they say that the curved surface of the Earth is a "true level!" What more can they want for a canal than a true level? Since they contradict themselves in such an elementary point as this, it is an evidence that the whole

thing is a delusion, and we have a proof that the Earth is not a globe.

42. It is certain that the theory of the Earth's rotundity and that of its mobility must stand or fall together. A proof, then, of its immobility is virtually a proof of its non-rotundity. Now, that the Earth does not move, either on an axis, or in an orbit round the Sun or anything else, is easily proven. If the Earth went through space at the rate of eleven-hundred miles in a minute of time, as astronomers teach us, in a particular direction, there would unquestionably be a difference in the result of firing off a projectile in that direction and in a direction the opposite of that one. But as, in fact, there is not the slightest difference in any such case, it is clear that any alleged motion of the Earth is disproved, and that, therefore, we have a proof that the Earth is not a globe.

43. The circumstances which attend bodies which are caused merely to fall from a great height prove nothing as to the motion or stability of the Earth, since the object, if it be on a thing that is in motion, will participate in that motion; but, if an object be thrown upwards from a body at rest, and, again, from a body in motion, the circumstances attending its descent will be very different. In the former case, it will fall, if thrown vertically upwards, at the place from whence it was projected; in the latter case, it will fall behind—the moving body from which it is thrown will leave it in the rear. Now, fix a gun, muzzle upwards, accurately, in the ground; fire off a projectile; and it will fall by the gun. If the Earth travelled eleven-hundred miles a minute, the projectile would fall behind the gun, in the opposite direction to that of the supposed motion. Since, then, this is NOT the case, in fact, the Earth's fancied motion is negatived, and we have a proof that the Earth is not a globe.

44. It is in evidence that, if a projectile be fired from a rapidly moving body in an opposite direction to that in which the body is going, it will fall short of the distance at which it would reach the ground if fired in the direction of motion. Now, since the Earth is said to move at the rate of nineteen miles in a second of time, "from west to east," it would make all the difference imaginable if the gun were fired in an opposite direction. But, as, in practice, there is not the slightest difference, whichever way the thing may be done, we have a forcible overthrow of all fancies relative to the motion of the Earth, and a striking proof that the Earth is not a globe.

45. The Astronomer Royal, of England, George B. Airy, in his celebrated work on Astronomy, the "Ipswich Lectures," says: "Jupiter is a large planet that turns on his axis, and why do not we turn?" Of course, the common sense reply is: Because the Earth is not a planet! When, therefore, an astronomer royal puts words into our mouth wherewith we may overthrow the supposed planetary nature of the Earth, we have not far to go to pick up a proof that Earth is not a globe.

46. It has been shown that an easterly or a westerly motion is necessarily a circular course round the central North. The only north point or centre of motion of the heavenly bodies known to man is that formed by the North Star, which is over the central portion of the outstretched Earth. When, therefore, astronomers tell us of

a planet taking a westerly course round the Sun, the thing is as meaningless to them as it is to us, unless they make the Sun the northern centre of the motion, which they cannot do! Since, then, the motion which they tell us the planets have is, on the face of it, absurd; and since, as a matter of fact, the Earth can have no absurd motion at all, it is clear that it cannot be what astronomers say it is—a planet; and, if not a planet, it is a proof that Earth is not a globe.

47. In consequence of the fact being so plainly seen, by everyone who visits the sea-shore, that the line of the horizon is a perfectly straight line, it becomes impossible for astronomers, when they attempt to convey, pictorially, an idea of the Earth's "convexity," to do so with even a shadow of consistency: for they dare not represent this horizon as a curved line, so well known is it that it is a straight one! The greatest astronomer of the age, in page 15 of his "Lessons," gives an illustration of a ship sailing away, "as though she were rounding the top of a great hill of water;" and there—of a truth—is the straight and level line of the horizon clear along the top of the "hill" from one side of the picture to the other! Now, if this picture were true in all its parts—and it is outrageously false in several—it would show that Earth is a cylinder; for the "hill" shown is simply up one side of the level, horizontal line, and, we are led to suppose, down the other! Since, then, we have such high authority as Professor Richard A. Proctor that the Earth is a cylinder, it is, certainly, a proof that the Earth is not a globe.

48. In Mr. Proctor's "Lessons in Astronomy," page 15, a ship is represented as sailing away from the observer, and it is given in five positions or distances away on its journey. Now, in its first position, its mast appears above the horizon, and, consequently, higher than the observer's line of vision. But, in its second and third positions, representing the ship as further and further away, it is drawn higher and still higher up above the line of the horizon! Now, it is utterly impossible for a ship to sail away from an observer, under the conditions indicated, and to appear as given in the picture. Consequently, the picture is a misrepresentation, a fraud, and a disgrace. A ship starting to sail away from an observer with her masts above his line of sight would appear, indisputably, to go down and still lower down towards the horizon line, and could not possibly appear—to anyone with his vision undistorted—as going in any other direction, curved or straight. Since, then, the design of the astronomer-artist is to show the Earth to be a globe, and the points in the picture, which would only prove the Earth to be cylindrical if true, are not true, it follows that the astronomer-artist fails to prove, pictorially, either that the Earth is a globe or a cylinder, and that we have, therefore, a reasonable proof that the Earth is not a globe.

49. It is a well-known fact that clouds are continually seen moving in all manner of directions—yes, and frequently, in different directions at the same time—from west to east being as frequent a direction as any other. Now, if the Earth were a globe, revolving through space from west to east at the rate of nineteen miles in a second, the clouds appearing to us to move towards the east would have to move quicker than nineteen miles in a second to be thus seen; whilst those which

appear to be moving in the opposite direction would have no necessity to be moving at all, since the motion of the Earth would be more than sufficient to cause the appearance. But it only takes a little common sense to show us that it is the clouds that move just as they appear to do, and that, therefore, the Earth is motionless. We have, then, a proof that the Earth is not a globe.

50. We read in the inspired book, or collection of books, called THE BIBLE, nothing at all about the Earth being a globe or a planet, from beginning to end, but hundreds of allusions there are in its pages which could not be made if the Earth were a globe, and which are, therefore, said by the astronomer to be absurd and contrary to what he knows to be true! This is the groundwork of modern infidelity. But, since every one of many, many allusions to the Earth and the heavenly bodies in the Scriptures can be demonstrated to be absolutely true to nature, and we read of the Earth being "stretched out" "above the waters," as "standing in the water and out of the water," of its being "established that it cannot be moved," we have a store from which to take all the proofs we need, but we will just put down one proof—the Scriptural proof—that Earth is not a globe.

51. A "Standing Order" exists in the English Houses of Parliament that, in the cutting of canals, &c., the datum line employed shall be a "horizontal line, which shall be the same throughout the whole length of the work." Now, if the Earth were a globe, this "Order" could not be carried out: but, it is carried out: therefore, it is a proof that the Earth is not a globe.

52. It is a well-known and indisputable fact that there is a far greater accumulation of ice south of the equator than is to be found at an equal latitude north: and it is said that at Kerguelen, 50 degrees south, 18 kinds of plants exist, whilst, in Iceland, 15 degrees nearer the northern centre, there are 870 species; and, indeed, all the facts in the case show that the Sun's power is less intense at places in the southern region than it is in corresponding latitudes north. Now, on the Newtonian hypothesis, all this is inexplicable, whilst it is strictly in accordance with the facts brought to light by the carrying out of the principles involved in the Zetetic Philosophy of "Parallax." This is a proof that the Earth is not a globe.

53. Every year the Sun is as long south of the equator as he is north; and if the Earth were not "stretched out" as it is, in fact, but turned under, as the Newtonian theory suggests, it would certainly get as intensive a share of the Sun's rays south as north; but the Southern region being, in consequence of the fact stated, far more extensive than the region North, the Sun, having to complete his journey round every twenty-four hours, travels quicker as he goes further south, from September to December, and his influence has less time in which to accumulate at any given point. Since, then, the facts could not be as they are if the Earth were a globe, it is a proof that the Earth is not a globe.

54. The aeronaut is able to start in his balloon and remain for hours in the air, at an elevation of several miles, and come down again in the same county or parish from which he ascended. Now, unless the Earth drag the balloon along with it in its nineteen-miles-a-

second motion, it must be left far behind, in space: but, since balloons have never been known thus to be left, it is a proof that the Earth does not move, and, therefore, a proof that the Earth is not a globe.

55. The Newtonian theory of astronomy requires that the Moon "borrow" her light from the Sun. Now, since the Sun's rays are hot and the Moon's light sends with it no heat at all, it follows that the Sun and Moon are "two great lights," as we somewhere read; that the Newtonian theory is a mistake; and that, therefore, we have a proof that the Earth is not a globe.

56. The Sun and Moon may often be seen high in the heavens at the same time—the Sun rising in the east and the Moon setting in the west—the Sun's light positively putting the Moon's light out by sheer contrast! If the accepted Newtonian theory were correct, and the Moon had her light from the Sun, she ought to be getting more of it when face to face with that luminary—if it were possible for a sphere to act as a reflector all over its face! But as the Moon's light pales before the rising Sun, it is a proof that the theory fails; and this gives us a proof that the Earth is not a globe.

57. The Newtonian hypothesis involves the necessity of the Sun, in the case of a lunar eclipse, being on the opposite side of a globular earth, to cast its shadow on the Moon: but, since eclipses of the Moon have taken place with both the Sun and the Moon above the horizon, it follows that it cannot be the shadow of the Earth that eclipses the Moon; that the theory is a blunder; and that it is nothing less than a proof that the Earth is not a globe.

58. Astronomers have never agreed amongst themselves about a rotating Moon revolving round a rotating and revolving Earth—this Earth, Moon, planets and their satellites all, at the same time dashing through space, around the rotating and revolving Sun, towards the constellation Hercules, at the rate of four millions of miles a day! And they never will: agreement is impossible! With the Earth a plane and without motion, the whole thing is clear. And if a straw will show which way the wind blows, this may be taken as a pretty strong proof that the Earth is not a globe.

59. Mr. Proctor says: "The Sun is so far off that even moving from one side of the Earth to the other does not cause him to be seen in a different direction—at least the difference is too small to be measured." Now, since we know that north of the equator, say 45 degrees, we see the Sun at mid-day to the south, and that at the same distance south of the equator we see the Sun at mid-day to the north, our very shadows on the ground cry aloud against the delusion of the day and give us a proof that Earth is not a globe.

60. There is no problem more important to the astronomer than that of the Sun's distance from the Earth. Every change in the estimate changes everything. Now, since modern astronomers, in their estimates of this distance, have gone all the way along the line of figures from three millions of miles to a hundred and four millions—to-day, the distance being something over 91,000,000; it matters not how much: for, not many years ago, Mr. Hind gave the distance, "accurately," as 95,370,000!—it follows that they don't know, and that it is foolish for anyone to expect that they ever will know, the Sun's



BIG BEN OBELISK
WITH PYRAMID OBELISK SHARD LIKE SAN
FRANCISCO HAS AS WELL



ARGENTINA



"washington" obelisk
with reflecting pool as
above so below
hermetic satanism

MASONIC OBELISKS

Saturn(Satan) V Obelisk for
launch(masonic sex ritual).
Earth is flat no rockets go to space
there is no space like they tell us.



The City,
London

Washington
Monument

Vatican

Vatican infiltration by kabbalists artists
architects in occultist "renaissance"
rosicrucian/english/german origins like it's
sister protestant movment. "Do as thou wilt"



Superman=
augmented
transhuman DNA
manipulation, "men
as gods"



abortion is ritual
Roman sacrifice

Mocking
the LORD
LORDE

distance! And since all this speculation and absurdity is caused by the primary assumption that Earth is a wandering, heavenly body, and is all swept away by a knowledge of the fact that Earth is a plane, it is a clear proof that Earth is not a globe.

61. It is plain that a theory of measurements without a measuring-rod is like a ship without a rudder; that a measure that is not fixed, not likely to be fixed, and never has been fixed, forms no measuring-rod at all; and that as modern theoretical astronomy depends upon the Sun's distance from the Earth as its measuring-rod, and the distance is not known, it is a system of measurements without a measuring-rod—a ship without a rudder. Now, since it is not difficult to foresee the dashing of this thing upon the rock on which Zetetic astronomy is founded, it is a proof that Earth is not a globe.

62. It is commonly asserted that "the Earth must be a globe because people have sailed round it." Now, since this implies that we can sail round nothing unless it be a globe, and the fact is well known that we can sail round the Earth as a plane, the assertion is ridiculous, and we have another proof that Earth is not a globe.

63. It is a fact not so well known as it ought to be that when a ship, in sailing away from us, has reached the point at which her hull is lost to our unaided vision, a good telescope will restore to our view this portion of the vessel. Now, since telescopes are not made to enable people to see through a "hill of water," it is clear that the hulls of ships are not behind a hill of water when they can be seen through a telescope though lost to our unaided vision. This is a proof that Earth is not a globe.

64. Mr. Glaisher, in speaking of his balloon ascents, says: "The horizon always appeared on a level with the car." Now, since we may search amongst the laws of optics in vain for any principle that would cause the surface of a globe to turn its face upwards instead of downwards, it is a clear proof that the Earth is not a globe.

65. The Rev. D. Olmsted, in describing a diagram which is supposed to represent the Earth as a globe, with a figure of a man sticking out at each side and one hanging head downwards, says: "We should dwell on this point until it appears to us as truly up,"—in the direction given to these figures as it does with regard to a figure which he has placed on the top! Now, a system of philosophy which requires us to do something which is, really, the going out of our minds, by dwelling on an absurdity until we think it is a fact, cannot be a system based on God's truth, which never requires anything of the kind. Since, then, the popular theoretical astronomy of the day requires this, it is evident that it is the wrong thing, and that this conclusion furnishes us with a proof that the Earth is not a globe.

66. It is often said that the predictions of eclipses prove astronomers to be right in their theories. But it is not seen that this proves too much. It is well known that Ptolemy predicted eclipses for six-hundred years, on the basis of a plane Earth, with as much accuracy as they are predicted by modern observers. If, then, the predictions prove the truth of the particular theories current at the time, they just as well prove one side of the question as the other, and enable us to lay claim to a proof that the Earth is not a globe.

67. Seven-hundred miles is said to be the length of the great Canal, in China. Certain it is that, when this canal was formed, no "allowance" was made for "curvature." Yet the canal is a fact without it. This is a Chinese proof that the Earth is not a globe.

68. Mr. J. N. Lockyer says: "Because the Sun seems to rise in the east and set in the west, the Earth really spins in the opposite direction; that is, from west to east." Now, this is no better than though we were to say—Because a man seems to be coming up the street, the street really goes down to the man! And since true science would contain no such nonsense as this, it follows that the so-called science of theoretical astronomy is not true, and, therefore, we have a proof that the Earth is not a globe.

69. Mr. Lockyer says: "The appearances connected with the rising and setting of the Sun and stars may be due either to our earth being at rest and the Sun and stars travelling round it, or the earth itself turning round, while the Sun and stars are at rest." Now, since true science does not allow of any such beggarly alternatives as these, it is plain that modern theoretical astronomy is not true science, and that its leading dogma is a fallacy. We have, then, a plain proof that the Earth is not a globe.

70. Mr. Lockyer, in describing his picture of the supposed proof of the Earth's rotundity by means of ships rounding a "hill of water," uses these words:—"Diagram showing how, when we suppose the earth is round, we explain how it is that ships at sea appear as they do." This is utterly unworthy of the name of Science! A science that begins by supposing, and ends by explaining the supposition, is, from beginning to end, a mere farce. The men who can do nothing better than amuse themselves in this way must be denounced as dreamers only, and their leading dogma a delusion. This is a proof that Earth is not a globe.

71. The astronomers' theory of a globular Earth necessitates the conclusion that, if we travel south of the equator, to see the North Star is an impossibility. Yet it is well known this star has been seen by navigators when they have been more than 20 degrees south of the equator. This fact, like hundreds of other facts, puts the theory to shame, and gives us a proof that the Earth is not a globe.

72. Astronomers tell us that, in consequence of the Earth's "rotundity," the perpendicular walls of buildings are, nowhere, parallel, and that even the walls of houses on opposite sides of a street are not strictly so! But, since all observation fails to find any evidence of this want of parallelism which theory demands, the idea must be denounced as being absurd and in opposition to all well-known facts. This is a proof that the Earth is not a globe.

73. Astronomers have made experiments with pendulums which have been suspended from the interior of high buildings, and have exulted over the idea of being able to prove the rotation of the Earth on its "axis," by the varying direction taken by the pendulum over a prepared table underneath—asserting that the table moved round under the pendulum, instead of the pendulum shifting and oscillating in different directions over the table! But, since it has been found that, as often as not, the pendulum went round the wrong way for the

“rotation” theory, chagrin has taken the place of exultation, and we have a proof of the failure of astronomers in their efforts to substantiate their theory, and, therefore, a proof that Earth is not a globe.

74. As to the supposed “motion of the whole Solar system in space,” the Astronomer Royal of England once said: “The matter is left in a most delightful state of uncertainty, and I shall be very glad if anyone can help us out of it.” But, since the whole Newtonian scheme is, to-day, in a most deplorable state of uncertainty—for, whether the Moon goes round the Earth or the Earth round the Moon has, for years, been a matter of “raging” controversy—it follows that, root and branch, the whole thing, is wrong; and, all hot from the raging furnace of philosophical phrensy, we find a glowing proof that Earth is not a globe.

75. Considerably more than a million Earths would be required to make up a body like the Sun—the astronomers tell us: and more than 53,000 suns would be wanted to equal the cubic contents of the star Vega. And Vega is a “small star!” And there are countless millions of these stars! And it takes 30,000,000 years for the light of some of these stars to reach us at 12,000,000 miles in a minute! And, says Mr. Proctor, “I think a moderate estimate of the age of the Earth would be 500,000,000 years! “Its weight,” says the same individual, “is 6,000,000,000,000,000,000,000 tons!” Now, since no human being is able to comprehend these things, the giving of them to the world is an insult—an outrage. And though they have all arisen from the one assumption that Earth is a planet, instead of upholding the assumption, they drag it down by the weight of their own absurdity, and leave it lying in the dust—a proof that Earth is not a globe.

76. Mr. J. R. Young, in his work on Navigation, says: “Although the path of the ship is on a spherical surface, yet we may represent the length of the path by a straight line on a plane surface.” (And plane sailing is the rule.) Now, since it is altogether impossible to “represent” a curved line by a straight one, and absurd to make the attempt, it follows that a straight line represents a straight line and not a curved one. And, since it is the surface of the waters of the ocean that is being considered by Mr. Young, it follows that this surface is a straight surface, and we are indebted to Mr. Young, a professor of navigation, for a proof that the Earth is not a globe.

77. “Oh, but if the Earth is a plane, we could go to the edge and tumble over!” is a very common assertion. This is a conclusion that is formed too hastily, and facts overthrow it. The Earth certainly is, just what man by his observation finds it to be, and what Mr. Proctor himself says it “seems” to be—flat; and we cannot cross the icy barrier which surrounds it. This is a complete answer to the objection, and, of course, a proof that Earth is not a globe.

78. “Yes, but we can circumnavigate the South easily enough,” is often said—by those who don’t know. The British Ship Challenger recently completed the circuit of the Southern region—indirectly, to be sure—but she was three years about it, and traversed nearly 69,000 miles—a stretch long enough to have taken her six times round on the globular hypothesis. This is a proof that Earth is not a globe,

79. The remark is common enough that we can see the circle of the Earth if we cross the ocean, and that this proves it to be round. Now, if we tie a donkey to a stake on a level common, and he eats the grass all around him, it is only a circular disc that he has to do with, not a spherical mass. Since, then, circular discs may be seen anywhere—as well from a balloon in the air as from the deck of a ship, or from the standpoint of the donkey, it is a proof that the surface of the Earth is a plane surface, and, therefore, a proof that the Earth is not a globe.

80. It is “supposed,” in the regular course of the Newtonian theory, that the Earth is, in June, about 190 millions of miles (190,000,000) away from its position in December. Now, since we can, (in middle north latitudes), see the North Star, on looking out of a window that faces it—and out of the very same corner of the very same pane of glass in the very same window—all the year round, it is proof enough for any man in his senses that we have made no motion at all. It is a proof that the Earth is not a globe.

81. Newtonian philosophers teach us that the Moon goes round the Earth from west to east. But observation—man’s most certain mode of gaining knowledge—shows us that the Moon never ceases to move in the opposite direction—from east to west. Since, then, we know that nothing can possibly move in two, opposite directions at the same time, it is a proof that the thing is a big blunder; and, in short, it is a proof that the Earth is not a globe.

82. Astronomers tell us that the Moon goes round the Earth in about 28 days. Well, we may see her making her journey round, every day, if we make use of our eyes—and these are about the best things we have to use. The Moon falls behind in her daily motion as compared with that of the Sun to the extent of one revolution in the time specified; but that is not making a revolution. Failing to go as fast as other bodies go in one direction does not constitute a going round in the opposite one—as the astronomers would have us believe! And, since all this absurdity has been rendered necessary for no other purpose than to help other absurdities along, it is clear that the astronomers are on the wrong track; and it needs no long train of reasoning to show that we have a proof that the Earth is not a globe.

83. It has been shown that meridians are, necessarily, straight lines; and that it is impossible to travel round the Earth in a north or south direction: from which it follows that, in the general acceptance of the word “degree,”—the 360th part of a circle—meridians have no degrees: for no one knows anything of a meridian circle or semicircle, to be thus divided. But astronomers speak of degrees of latitude in the same sense as those of longitude. This, then, is done by assuming that to be true which is not true. Zetetic philosophy does not involve this necessity. This proves that the basis of this philosophy is a sound one, and, in short, is a proof that the Earth is not a globe.

84. If we move away from an elevated object on or over a plain or a prairie, the height of the object will apparently diminish as we do so. Now, that which is sufficient to produce this effect on a small scale is sufficient on a large one; and travelling away from an elevated

object, no matter how high, over a level surface, no matter how far, will cause the appearance in question—the lowering of the object. Our modern theoretical astronomers, however, in the case of the apparent lowering of the North Star as we travel southward, assert that it is evidence that the Earth is globular! But, as it is clear that an appearance which is fully accounted for on the basis of known facts cannot be permitted to figure as evidence in favor of that which is only a supposition, it follows that we rightfully order it to stand down, and make way for a proof that the Earth is not a globe.

85. There are rivers which flow east, west, north, and south—that is, rivers are flowing in all directions over the Earth's surface, and at the same time. Now, if the Earth were a globe, some of these rivers would be flowing up-hill and others down, taking it for a fact that there really is an "up" and a "down" in nature, whatever form she assumes. But, since rivers do not flow up-hill, and the globular theory requires that they should, it is a proof that the Earth is not a globe.

86. If the Earth were a globe, rolling and dashing through "space" at the rate of "a hundred miles in five seconds of time," the waters of seas and oceans could not, by any known law, be kept on its surface—the assertion that they could be retained under these circumstances being an outrage upon human understanding and credulity! But as the Earth—that is, the habitable world of dry land—is found to be "standing out of the water and in the water" of the "mighty deep," whose circumferential boundary is ice, we may throw the statement back into the teeth of those who make it and flaunt before their faces the flag of reason and common sense, inscribed with—a proof that the Earth is not a globe.

87. The theory of a rotating and revolving earth demands a theory to keep the water on its surface; but, as the theory which is given for this purpose is as much opposed to all human experience as the one which it is intended to uphold, it is an illustration of the miserable makeshifts to which astronomers are compelled to resort, and affords a proof that the Earth is not a globe.

88. If we could—after our minds had once been opened to the light of Truth—conceive of a globular body on the surface of which human beings could exist, the power—no matter by what name it be called—that would hold them on would, then, necessarily, have to be so constraining and cogent that they could not live; the waters of the oceans would have to be as a solid mass, for motion would be impossible. But we not only exist, but live and move; and the water of the ocean skips and dances like a thing of life and beauty! This is a proof that the Earth is not a globe.

89. It is well known that the law regulating the apparent decrease in the size of objects as we leave them in the distance (or as they leave us) is very different with luminous bodies from what it is in the case of those which are non-luminous. Sail past the light of a small lamp in a row-boat on a dark night, and it will seem to be no smaller when a mile off than it was when close to it. Proctor says, in speaking of the Sun: "his apparent size does not change,"—far off or near. And then he forgets the fact! Mr. Proctor tells us, subsequently, that, if

the traveller goes so far south that the North Star appears on the horizon, "the Sun should therefore look much larger"—if the Earth were a plane! Therefore, he argues, "the path followed cannot have been the straight course,"—but a curved one. Now, since it is nothing but common scientific trickery to bring forward, as an objection to stand in the way of a plane Earth, the non-appearance of a thing which has never been known to appear at all, it follows that, unless that which appears to be trickery were an accident, it was the only course open to the objector—to trick. (Mr. Proctor, in a letter to the "English Mechanic" for Oct. 20, 1871, boasts of having turned a recent convert to the Zetetic philosophy by telling him that his arguments were all very good, but that "it seems as though [mark the language!] the sun ought to look nine times larger in summer." And Mr. Proctor concludes thus: "He saw, indeed, that, in his faith in 'Parallax,' he had 'written himself down an ass.'") Well, then: trickery or no trickery on the part of the objector, the objection is a counterfeit—a fraud—no valid objection at all; and it follows that the system which does not purge itself of these things is a rotten system, and the system which its advocates, with Mr. Proctor at their head, would crush if they could find a weapon to use—the Zetetic philosophy of "Parallax"—is destined to live! This is a proof that the Earth is not a globe.

90. "Is water level, or is it not?" was a question once asked of an astronomer. "Practically, yes; theoretically, no," was the reply. Now, when theory does not harmonize with practice, the best thing to do is to drop the theory. (It is getting too late, now, to say "So much the worse for the facts!") To drop the theory which supposes a curved surface to standing water is to acknowledge the facts which form the basis of Zetetic philosophy. And since this will have to be done—sooner or later,—it is a proof that the Earth is not a globe.

91. "By actual observation," says Schœdler, in his "Book of Nature," "we know that the other heavenly bodies are spherical, hence we unhesitatingly assert that the earth is so also." This is a fair sample of all astronomical reasoning. When a thing is classed amongst "other" things, the likeness between them must first be proven. It does not take a Schœdler to tell us that "heavenly bodies" are spherical, but "the greatest astronomer of the age" will not, now, dare to tell us that THE EARTH is—and attempt to prove it. Now, since no likeness has ever been proven to exist between the Earth and the heavenly bodies, the classification of the Earth with the heavenly bodies is premature—unscientific—false! This is a proof that Earth is not a globe.

92. "There is no inconsistency in supposing that the earth does move round the sun," says the Astronomer Royal of England. Certainly not, when theoretical astronomy is all supposition together! The inconsistency is in teaching the world that the thing supposed is a fact. Since, then, the "motion" of the Earth is supposition only—since, indeed, it is necessary to suppose it at all—it is plain that it is a fiction and not a fact; and, since "mobility" and "sphericity" stand or fall together, we have before us a proof that Earth is not a globe.

93. We have seen that astronomers—to give us a level surface on

which to live—have cut off one-half of the “globe” in a certain picture in their books. [See page 6.] Now, astronomers having done this, one-half of the substance of their “spherical theory” is given up! Since, then, the theory must stand or fall in its entirety, it has really fallen when the half is gone. Nothing remains, then, but a plane Earth, which is, of course, a proof that the Earth is not a globe.

94. In “Cornell’s Geography” there is an “Illustrated proof of the Form of the Earth.” A curved line on which is represented a ship in four positions, as she sails away from an observer, is an arc of 72 degrees, or one-fifth of the supposed circumference of the “globe”—about 5,000 miles. Ten such ships as those which are given in the picture would reach the full length of the “arc,” making 500 miles as the length of the ship. The man, in the picture, who is watching the ship as she sails away, is about 200 miles high; and the tower, from which he takes an elevated view, at least 500 miles high. These are the proportions, then, of men, towers, and ships which are necessary in order to see a ship, in her different positions, as she “rounds the curve” of the “great hill of water” over which she is supposed to be sailing: for, it must be remembered that this supposed “proof” depends upon lines and angles of vision which, if enlarged, would still retain their characteristics. Now, since ships are not built 500 miles long, with masts in proportion, and men are not quite 200 miles high, it is not what it is said to be—a proof of rotundity—but, either an ignorant farce or a cruel piece of deception. In short, it is a proof that the Earth is not a globe.

95. In “Cornell’s Intermediate Geography,” (1881) page 12, is an “Illustration of the Natural Divisions of Land and Water.” This illustration is so nicely drawn that it affords, at once, a striking proof that Earth is a plane. It is true to nature, and bears the stamp of no astronomer-artist. It is a pictorial proof that Earth is not a globe.

96. If we refer to the diagram in “Cornell’s Geography,” page 4, and notice the ship in its position the most remote from the observer, we shall find that, though it is about 4,000 miles away, it is the same size as the ship that is nearest to him, distant about 700 miles! This is an illustration of the way in which astronomers ignore the laws of perspective. This course is necessary, or they would be compelled to lay bare the fallacy of their dogmas. In short, there is, in this matter, a proof that the Earth is not a globe.

97. Mr. Hind, the English astronomer, says: “The simplicity with which the seasons are explained by the revolution of the Earth in her orbit and the obliquity of the ecliptic, may certainly be adduced as a strong presumptive proof of the correctness”—of the Newtonian theory; “for on no other rational suppositions with respect to the relations of the Earth and Sun, can these and other as well-known phenomena, be accounted for.” But, as true philosophy has no “suppositions” at all—and has nothing to do with “suppositions”—and the phenomena spoken of are thoroughly explained by facts, the “presumptive proof” falls to the ground, covered with the ridicule it so richly deserves; and out of the dust of Mr. Hind’s “rational suppositions” we see standing before us a proof that Earth is not a globe.

98. Mr. Hind speaks of the astronomer watching a star as it is

“carried across the telescope by the diurnal revolution of the Earth.” Now, this is nothing but downright absurdity. No motion of the Earth could possibly carry a star across a telescope or anything else. If the star is carried across anything at all, it is the star that moves, not the thing across which it is carried! Besides, the idea that the Earth, if it were a globe, could possibly move in an orbit of nearly 600,000,000 of miles with such exactitude that the cross-hairs in a telescope fixed on its surface would appear to glide gently over a star “millions of millions” of miles away is simply monstrous; whereas, with a FIXED telescope, it matters not the distance of the stars, though we suppose them to be as far off as the astronomer supposes them to be; for, as Mr. Proctor himself says, “the further away they are, the less they will seem to shift.” Why, in the name of common sense, should observers have to fix their telescopes on solid stone bases so that they should not move a hair’s-breadth, if the Earth on which they fix them move at the rate of nineteen miles in a second? Indeed, to believe that Mr. Proctor’s mass of “six thousand million million tons” is “rolling, surging, flying, darting on through space for ever” with a velocity compared with which a shot from a cannon is a “very slow coach,” with such unerring accuracy that a telescope fixed on granite pillars in an observatory will not enable a lynx-eyed astronomer to detect a variation in its onward motion of the thousandth part of a hair’s-breadth is to conceive a miracle compared with which all the miracles on record put together would sink into utter insignificance. Captain R. J. Morrison, the late compiler of “Zadkeil’s Almanac,” says: “We declare that this ‘motion’ is all mere ‘bosh’; and that the arguments which uphold it are, when examined with an eye that seeks for TRUTH only, mere nonsense, and childish absurdity.” Since, then, these absurd theories are of no use to men in their senses, and since there is no necessity for anything of the kind in Zetetic philosophy, it is a “strong presumptive proof”—as Mr. Hind would say—that the Zetetic philosophy is true, and, therefore, a proof that Earth is not a globe.

99. Mr. Hind speaks of two great mathematicians differing only fifty-five yards in their estimate of the Earth’s diameter. Why, Sir John Herschel, in his celebrated work, cuts off 480 miles of the same thing to get “round numbers!” This is like splitting a hair on one side of the head and shaving all the hair off on the other! Oh, “science!” Can there be any truth in a science like this? All the exactitude in astronomy is in Practical astronomy—not Theoretical. Centuries of observation have made practical astronomy a noble art and science, based—as we have a thousand times proved it to be—on a fixed Earth; and we denounce this pretended exactitude on one side and the reckless indifference to figures on the other as the basest trash, and take from it a proof that the “science” which tolerates it is a false—instead of being an “exact”—science, and we have a proof that the Earth is not a globe.

100. The Sun, as he travels round over the surface of the Earth, brings “noon” to all places on the successive meridians which he crosses: his journey being made in a westerly direction, places east of the Sun’s position have had their noon, whilst places to the west of the

Sun's position have still to get it. Therefore, if we travel easterly, we arrive at those parts of the Earth where "time" is more advanced, the watch in our pocket has to be "put on," or we may be said to "gain time." If, on the other hand, we travel westerly, we arrive at places where it is still "morning," the watch has to be "put back," and it may be said that we "lose time." But, if we travel easterly so as to cross the 180th meridian, there is a loss, there, of a day, which will neutralize the gain of a whole circumnavigation; and, if we travel westerly, and cross the same meridian, we experience the gain of a day, which will compensate for the loss during a complete circumnavigation in that direction. The fact of losing or gaining time in sailing round the world, then, instead of being evidence of the Earth's "roundity," as it is imagined to be, is, in its practical exemplification, an everlasting proof that the Earth is not a globe.

"And what then?" What then! No intelligent man will ask the question; and he who may be called an intellectual man will know that the demonstration of the fact that the Earth is not a globe is the grandest snapping of the chains of slavery that ever took place in the world of literature or science. The floodgates of human knowledge are opened afresh and an impetus is given to investigation and discovery where all was stagnation, bewilderment and dreams! Is it nothing to know that infidelity cannot stand against the mighty rush of the living water of Truth that must flow on and on until the world shall look "up" once more "to Him that stretched out the earth above the waters"—"to Him that made great lights:—the Sun to rule by day—the Moon and Stars to rule by night?" Is it nothing to know and to feel that the heavenly bodies were made for man, and that the monstrous dogma of an infinity of worlds is overthrown for ever? The old-time English "Family Herald," for July 25, 1885, says, in its editorial, that "The earth's revolution on its own axis was denied, against Galileo and Copernicus, by the whole weight of the Church of Rome." And, in an article on "The Pride of Ignorance," too!—the editor not knowing that if the Earth had an axis to call its "own"—which the Church well knew it had not, and, therefore, could not admit—it would not "revolve" on it; and that the theoretical motion on an axis is that of rotation, and not revolution! Is it nothing to know that "the whole weight of the Church of Rome" was thrown in the right direction, although it has swayed back again like a gigantic pendulum that will regain its old position before long? Is it nothing to know that the "pride of ignorance" is on the other side? Is it nothing to know that, with all the Bradlaughs and Ingersolls of the world telling us to the contrary—Biblical science is true? Is it nothing to know that we are living on a body at rest, and not upon a heavenly body whirling and dashing through space in every conceivable way and with a velocity utterly inconceivable? Is it nothing to know that we can look stedfastly up to Heaven instead of having no heaven to look up to at all? Is it nothing, indeed, to be in the broad daylight of Truth and to be able to go on towards a possible perfection, instead of being wrapped in the darkness of error on the rough ocean of Life, and finding ourselves stranded at last—God alone knows where?

Baltimore, Maryland, U. S. A., August, 1885.



FLAGS WITH RED WHITE AND BLUE ARE MASONIC AS WELL.

FLAGS SYMBOLIZING LANDS IN BETWEEN WATERS-ORIGIN IS OLD TESTAMENT ISRAELITES RULE BETWEEN THE NILE AND EUPHRATES-THESE ARE LINKED COUNTRIES IN IDEOLOGY.

ARGENTINA, PERONS, NAZIS,
ONE OF THE LARGEST
MASONIC
OBELISKS IS HERE, LARGE

STATE OF ISRAEL, NO REAL
EXPLANATION NECESSARY. HEXAGRAM
BLACK MAGIC SYMBOL, STAR OF
MOLOCH/SATURN, HAVEN FOR
CRIMINALS FLEEING, Oligarchs, ARMS
DEALERS ETC ETC

NORTH KOREA "REPUBLIC" (ideal
masonic republic)
RULING FAMILY IS MOST LIKELY
OF PHARISEE Ethnicity, masonic at
the very least. RED STAR OF
judaeo-masonry's client proxy
communism. RED CHINA CLIENT
STATE, ONE OF THE USA's
BOOGYMEN-RULE THROUGH
FEAR

SAN SALVADOR-INFILTRATED BY COMMUNIST
WOLVES IN PRIESTS CLOTHES "LIBERATION
THEOLOGY" GARBAGE. NICE JUDAEO-
MASONIC PYRAMID. UNITED FRUIT 1950s
Eisenhower CIA INVASION NOW DOPE INC
HIGHWAY TO USA

APPENDIX TO THE SECOND EDITION.


The following letters remain unanswered, at the time of going to press, December 7, 1885:—

“71 Chew Street, Baltimore, Nov. 21, 1885. R. A. Proctor, Esq., St. Joe, Mo. Sir: I have sent you two copies of my ‘One Hundred Proofs that the Earth is Not a Globe,’ and, as several weeks have since elapsed and I have not heard from you, I write to inform you that if you have any remarks to make concerning that publication, and will let me have them in the course of a week or ten days, I will print them—if you say what you may wish to say in about five or six hundred words—in the second edition of the pamphlet, which will very soon be called for. Allow me to say that, as this work is not only ‘dedicated’ to you but attacks your teachings, the public will be looking for something from your pen very shortly. I hope they may not be disappointed. Yours in the cause of truth, W. Carpenter.”

“71 Chew Street, Baltimore, Nov. 24, 1885. Spencer F. Baird, Esq., Secretary of the Smithsonian Institution, Washington, D. C. Sir:—I had the pleasure, several weeks ago, of sending you my ‘One Hundred Proofs that the Earth is Not a Globe.’ I hope you received them. A second edition is now called for, and I should esteem it a favor if you would write me a few words concerning them that I may print with this forthcoming edition as an appendix to them. If you think any of the ‘Hundred Proofs’ are unsound, I will print all you may have to say about them, if not over 400 words, as above stated. I have made Richard A. Proctor, Esq., a similar offer, giving him, of course, a little more space. I feel sure that the very great importance of this matter will prompt you to give it your immediate attention. I have the honor to be, sir, yours sincerely, Wm. Carpenter.”

Copies of the first edition of this pamphlet have been sent to the leading newspapers of this country and of England, and to very many of the most renowned scientific men of the two countries—from the Astronomer Royal, of England, to Dr. Gilman, of Johns Hopkins University, Baltimore. Several copies have been sent to graduates of different Universities, on application, in consequence of the subjoined advertisement, which has appeared in several newspapers:—

“WANTED.—A Scholar of ripe attainments to review Carpenter’s ‘One Hundred Proofs that the Earth is Not a Globe.’ Liberal remuneration offered. Apply to Wm. Carpenter, 71 Chew Street, Baltimore. N.B.—No one need apply who has not courage enough to append his name to the Review for publication.”

 We should be pleased to hear from some of the gentlemen in time for the insertion of their courageous attacks in the Third edition!

OPINIONS OF THE PRESS.

“This can only be described as an extraordinary book. . . His arguments are certainly plausible and ingenious, and even the reader who does not agree with him will find a singular interest and fascination in analyzing the ‘one hundred proofs.’ . . The proofs are set forth in brief, forcible, compact, very clear paragraphs, the meaning of which can be comprehended at a glance.”—Daily News, Sept. 24,

"Throughout the entire work there are discernible traces of a strong and reliant mind, and such reliance as can only have been acquired by unbiassed observation, laborious investigation, and final conviction; and the masterly handling of so profound a theme displays evidence of grave and active researches. There is no groping wildly about in the vagueness of theoretical speculations, no empty hypotheses inflated with baseless assertions and false illustrations, but the practical and perspicuous conclusions of a mind emancipated from the prevailing influences of fashionable credence and popular prejudice, and subordinate only to those principles emanating from reason and common sense."—H. D. T., Woodberry News, Sept. 26, 1885.

"We do not profess to be able to overthrow any of his 'Proofs.' And we must admit, and our readers will be inclined to do the same, that it is certainly a strange thing that Mr. Wm. Carpenter, or anyone else, should be able to bring together 'One Hundred Proofs' of anything in the world if that thing is not right, while we keep on asking for one proof, that is really a satisfactory one, on the other side. If these 'Hundred Proofs' are nonsense, we cannot prove them to be so, and some of our scientific men had better try their hands, and we think they will try their heads pretty badly into the bargain."—The Woodberry News, Baltimore, Sept. 19, 1885.

"This is a remarkable pamphlet. The author has the courage of his convictions, and presents them with no little ingenuity, however musty they may appear to nineteenth century readers. He takes for his text a statement of Prof. Proctor's that 'The Earth on which we live and move seems to be flat,' and proceeds with great alacrity to marshal his hundred arguments in proof that it not only seems but is flat, 'an extended plane, stretched out in all directions away from the central North.' He enumerates all the reasons offered by scientists for a belief in the rotundity of the earth and evidently to his own complete satisfaction refutes them. He argues that the heavenly bodies were made solely to light this world, that the belief in an infinity of worlds is a monstrous dogma, contrary to Bible teaching, and the great stronghold of the infidel; and that the Church of Rome was right when it threw the whole weight of its influence against Galileo and Copernicus when they taught the revolution of the earth on its axis."—Michigan Christian Herald, Oct. 15, 1885.

"So many proofs."—Every Saturday, Sept. 26, 1885.

"A highly instructive and very entertaining work. . . The book is well worth reading."—Protector, Baltimore, Oct. 3, 1885.

"The book will be sought after and read with peculiar interest."—Baltimore Labor Free Press, Oct. 17, 1885.

"Some of them [the proofs] are of sufficient force to demand an answer from the advocates of the popular theory."—Baltimore Episcopal Methodist, October 28, 1885.

"Showing considerable smartness both in conception and argument."—Western Christian Advocate, Cincinnati, O., Oct. 21, 1885.

"Forcible and striking in the extreme."—Brooklyn Market Journal.

Baltimore, Maryland, U. S. A., December 7, 1885.

[Appendix to Third Edition.]

COPY OF LETTER FROM RICHARD A. PROCTOR, ESQ.

5 Montague Street, Russell Square, London, W.C., 12 Dec., 1885.

W. Carpenter, Esq., Baltimore.

Dear Sir,—I am obliged to you for the copy of your “One Hundred Proofs that the Earth is not a Globe,” and for the evident kindness of your intention in dedicating the work to me. The only further remark it occurs to me to offer is that I call myself rather a student of astronomy than an astronomer.

Yours faithfully,

RICHARD A. PROCTOR.

P. S. Perhaps the pamphlet might more precisely be called “One hundred difficulties for young students of astronomy.”

[Appendix to Fourth Edition.]

COPY OF LETTER FROM SPENCER F. BAIRD, ESQ.

Smithsonian Institution, Washington, D. C., Jan. 6, 1886.

Dear Sir,—A copy of your “One Hundred Proofs that the Earth is not a globe” was duly received, and was deposited in Library of Congress October 8, 1884. [1885] A pressure of much more important work has prevented any attempt at reviewing these hundred proofs:—which however have doubtless been thoroughly investigated by the inquisitive astronomers and geodesists of the last four centuries.

Yours very respectfully,

SPENCER F. BAIRD, Secretary S. I.

Mr. William Carpenter, 71, Chew Street, Baltimore, Md.

Copy of a letter from one of the several applicants for the “One Hundred Proofs” for the purpose of reviewing them. The writer is Professor of Mathematics at the High School, Auburn, N. Y., and, in his application for the pamphlet, says: “Am a Yale graduate and a Yale Law School man: took the John A Porter Prize (literary) (\$250) at Yale College.”

Auburn, Dec. 10th, 1885. My Dear Sir: Your treatise was received. I have looked it over and noted it somewhat. A review of it to do it justice would be a somewhat long and laborious task. Before I undertook so much thought I would write and ask What and how much you expect: how elaborately you wished it discussed: and what remuneration might be expected. It sets forth many new and strange doctrines which would have to be thoroughly discussed and mastered before reviewed. I am hard at work at present but would like to tackle this if it would be for my interest as well as yours. Hope you will let me know very soon. Very respectfully,

To Mr. W. Carpenter, Baltimore, Md.

FRANK STRONG.

NOTE.—Unless a man be willing to sell his soul for his supposed worldly “interest,” he will not dare to “tackle” the “One Hundred Proofs that the Earth is Not a Globe.” No man with well-balanced faculties will thus condemn himself. We charge the mathematicians of the world that, if they cannot say what they think of this pamphlet in a dozen words, they are entitled to no other name than—cowards!

Baltimore, Maryland, May 22, 1886.

APPENDIX TO THE FIFTH EDITION.

Editorial from the "New York World," of August 2, 1886:—

THE EARTH IS FLAT.

The iconoclastic tendencies of the age have received new impetus from Mr. WILLIAM CARPENTER, who comes forward with one hundred proofs that the earth is not a globe. It will be a sad shock to many conservatives who have since their childhood fondly held to the conviction that "the earth is round like an orange, a little flattened at the poles." To find that, after all, we have been living all these years on a prosaic and unromantic plane is far from satisfactory. We have rather gloried in the belief that the semi-barbarous nations on the other side of the earth did not carry their heads in the same direction in which ours point. It is hard to accept the assertion that the cannibals on savage islands are walking about on the same level with the civilized nations of our little world.

But Mr. CARPENTER has one hundred proofs that such is the unsatisfactory truth. Not only that, but the iconoclast claims that we are not whirling through space at a terrible rate, but are absolutely stationary. Some probability is given to this proposition by the present hot weather. The earth seems to be becalmed. If it were moving at the rate of nineteen miles a second would n't there be a breeze? This question is thrown out as perhaps offering the one hundred and first proof that the earth is not a globe. Mr. CARPENTER may obtain the proof in detail at the office at our usual rates. A revolution will, of course, take place in the school geographies as soon as Mr. CARPENTER's theories have been closely studied. No longer will the little boy answer the question as to the shape of the earth by the answer which has come ringing down the ages, "It's round like a ball, sir." No. He'll have to use the unpoetic formula, "It's flat like a pancake, sir."

But, perhaps, after we have become used to the new idea it will not be unpleasant. The ancients flourished in the belief that the earth was a great plane. Why shouldn't we be equally fortunate? It may be romantic but it is not especially comforting to think that the earth is rushing through space twisting and curving like a gigantic ball delivered from the hand of an enormous pitcher. Something in the universe might make a base hit if we kept on and we would be knocked over an aerial fence and never found. Perhaps, after all, it is safer to live on Mr. CARPENTER's stationary plane.

The "Record," of Philadelphia, June 5, 1886, has the following, in the Literary Notes:—"Under the title *One Hundred Proofs that the Earth is Not a Globe*, Mr. William Carpenter, of Baltimore, publishes a pamphlet which is interesting on account of the originality of the views advanced, and, from his standpoint, the very logical manner in which he seeks to establish their truth. Mr. Carpenter is a disciple of what is called the Zetetic school of philosophy, and was referee for Mr. John Hampden when that gentleman, in 1870, made a wager with Mr. Alfred R. Wallace, of England, that the surface of standing water is always level, and therefore that the earth is flat. Since then he has combated his views with much earnestness, both in writing and on the platform, and, whatever opinions we may have on the subject, a perusal of his little book will prove interesting and afford room for careful study."

"The motto which he puts on the cover—'Upright, Downright, Straightforward'—is well chosen, for it is an upright lie, a downright invention, and a straightforward butt of a bull at a locomotive."—The Florida Times Union, Dec. 13, 1885. Editor, Charles H. Jones. [Pray, Mr. Jones, tell us what you mean by "an upright lie."!!]

"We have received a pamphlet from a gentleman who thinks to prove that the earth is flat, but who succeeds only in showing that he is himself one."—New York Herald, Dec. 19, 1885. [The reviewer, in this case, is, no doubt, a very "sharp" man, but his honesty—if he have any at all—is jagged and worn out. The "quotations" which he gives are fraudulent, there being nothing like them in the pamphlet.]

"The author of the pamphlet is no 'flat,' though he may perhaps be called a 'crank.'"—St. Catharines (Can.) Evening Jour., Dec. 23.

"To say that the contents of the book are erudite and entertaining does not do Mr. Carpenter's astronomical ability half credit."—The Sunday Truth, Buffalo, Dec. 27, 1885.

"The entire work is very ingeniously gotten up. . . The matter of perspective is treated in a very clever manner, and the coming up of 'hull-down' vessels on the horizon is illustrated by several well-worded examples."—Buffalo Times, Dec. 28, 1885.

"The erudite author, who travels armed with plans and specifications to fire at the skeptical at a moment's notice, feels that he is doing a good work, and that his hundred anti-globular conclusions must certainly knock the general belief in territorial rotundity out of time."

"We trust that the distinguished author who has failed to coax Richard Proctor into a public discussion may find as many citizens willing to invest two shillings in his peculiar literature as he deserves."—Buffalo Courier, Dec. 27, 1885, and Jan. 1, 1886.

"It is a pleasure now to see a man of Mr. Carpenter's attainments fall into line and take up the cudgels against the theories of the scientists who have taught this pernicious doctrine [the "sphericity of the earth"]."—Rochester Morning Herald, Jan. 13, 1886.

"As the game stands now, there is 'one horse' for Prof. Carpenter."—Buffalo World, Jan. 16, 1886.

"It is interesting to show how much can be said in favor of the flat world theory. . . It is fairly well written, although, we believe filled with misstatements of facts."—Rochester Democrat and Chronicle, Jan. 17, 1886. [We "believe" the editor cannot point one out.]

"It is certainly worth twice the price, and will be read by all with peculiar interest."—Scranton Truth, March 8, 1886.

"Mr. WILLIAM CARPENTER has come to Washington with a "hundred proofs that the earth is not a globe." He has a pamphlet on the subject which is ingenious, to say the least, and he is ominously eager to discuss the matter with any one who still clings to the absurd prejudices of the astronomers."—The Hatchet, May 9, 1886.

"It contains some curious problems for solution, and the author boldly asserts that until they are solved the globular theory of the earth remains unproven, and is fallacious, &c."—The Presbyterian, Philadelphia, June 19, 1886.

"His reasoning is, to say the least, plausible, and the book interesting."—*The Item*, Philadelphia, June 10, 1886.

"Mr. Carpenter seems to have made a thorough investigation of the subject, and his arguments are practical and to the point."—*Sunday Mercury*, Philadelphia, June 13, 1886.

"A gentleman has just called at the editorial rooms with a pamphlet which is designed to demonstrate that the earth is not a globe, but a flat disk; he also laid before us a chart from which it plainly appeared that the earth is a circular expanse of land, with the north pole in the exact center, and the Antarctic Sea flowing all around the land. . . . We went on to state that we lodged the care of all astronomical questions in the hands of Rev. R. M. Luther, to whom these perplexing matters are but as child's play. . . . Our readers may, therefore, expect at an early date a judicial view of the astronomical and cosmological situation."—*National Baptist*, Philadelphia, July 8, 1886. Editor, Dr. Wayland. [We hope that the Rev. R. M. Luther will give us the means of publishing his decision before many more editions of the "Hundred Proofs" be issued. We are afraid that he finds the business much more than "child's play."]

"One Hundred Proofs that the Earth is Not a Globe," by William Carpenter, is published by the author, whose novel and rather startling position is certainly fortified by a number of argumentative points, which, if they do not shake the reader's preconceived notions on the subject, will, at least, be found entertaining for the style in which they are put."—*Evening Star*, Philadelphia, July 22, 1886.

"His 'Proofs' go a long way towards convincing many that his ideas on the subject are practical and sensible."—*Fashion Journal*, Philadelphia, July, 1886. Editor, Mrs. F. E. Benedict.

"'One Hundred Proofs that the Earth is Not a Globe' is a curious little pamphlet that we can commend to all interested in astronomy and related sciences. It may not upset received notions on the subject, but will give cause for much serious reflection. Published by the author, Wm. Carpenter, Baltimore, Md. Price 25 cents."—*The Saturday Evening Post*, Philadelphia, July 31, 1886.

"Here now is an able thinker of Baltimore, Professor WILLIAM CARPENTER, who presents the claims of the Zetetic philosophy to be considered the leading issue of our times. . . . One of the great proofs of the truth of the philosophy is that the regular astronomers do not dare to gainsay it. . . . They are well aware there is no South pole. . . . Prof. CARPENTER, in a treatise that has reached us, furnishes 100 proofs that the earth is flat, and while we cannot say that we understand all of them we appreciate the earnestness of his appeals to the moral people of the community to rise up and overthrow the miserable system of error that is being forced upon our children in the public schools, vitiating the very foundations of knowledge. What issue can be more noble or inspiring than Truth vs. Error? Here is an issue on which there can be no trifling or compromise. In the great contest between those who hold the earth is flat and they who contend that it is round, let the flats assert themselves."—*Milwaukee Sentinel*, Aug., 1886. [From a long article, "The Great Zetetic Issue."]

LETTERS TO PROFESSOR GILMAN, OF THE JOHNS
HOPKINS UNIVERSITY.

71 Chew Street, Baltimore, September 10, 1886.

Prof. Gilman, Johns Hopkins University—Sir: On the 21st ultimo I wrote to ask you if you received the pamphlet, which I left for you at the University twelve months ago, entitled "One Hundred Proofs that the Earth is Not a Globe," and, if so, that you would kindly give me your opinion concerning it. I write, now, to ask you if you received my letter. I am quite sure that you will consider that the importance of the subject fully warrants the endeavor on my part to gain the views which may be entertained by you respecting it. The fifth edition will soon be called for, and anything you may urge—for or against—I shall be happy to insert in the "appendix." I send, herewith, a copy of the fourth edition of the pamphlet.

Yours sincerely, William Carpenter.

71 Chew Street, Baltimore, October 7, 1886.

Professor Gilman—Dear Sir: I am now preparing the appendix for the fifth edition of my "One Hundred Proofs that the Earth is Not a Globe," and I should be glad to receive your opinion of this work to insert in the said appendix. I can offer you from a few lines to a page, or two if necessary. Of course, if this work as a whole be a fraud, it must be fraudulent in all its parts; and each one of the "hundred proofs" must contain a fallacy of some kind or other, and the thing would justify your disapprobation—expressed in few words or many. If, on the other hand, the work is what it professes to be, it will certainly claim your approval. Yours sincerely, W. Carpenter.

71 Chew Street, Baltimore, October 14, 1886.

Prof. Gilman—Dear Sir: A week ago I wrote you a letter to tell you that I should be glad to receive your opinion of the "Hundred Proofs that the Earth is Not a Globe," of which work 5,000 copies are now in circulation. I wrote this work (26 pages) in one week, without neglecting my daily business: surely, you can reply to it in a week from this time. I will give you from one to four pages, if you wish that amount of space, and send you fifty copies, if you desire to have them, without putting you to the slightest expense. I will even take any suggestion you please to make as to the title which shall be given to this extra edition of my work containing your reply or opinions. I should be sorry to be under the necessity of printing this letter, with others, in my next edition, in the place of any such reply or expression of opinion; for I feel sure there is no one in Baltimore who is more capable of giving an opinion on this great subject. Trusting to hear from you in a few days, I am, Dear Sir, Yours truly,

William Carpenter.

71 Chew Street, Baltimore, October 22, 1886.

Prof. Gilman—Sir: This is the fifth letter—and the last—to you, asking you for an expression of your opinion concerning the "One Hundred Proofs that the Earth is Not a Globe." Which would you prefer—to see my words, or yours, in print? I give you a week in which to decide.

Truly, William Carpenter.

THE JOHNS HOPKINS UNIVERSITY, OF BALTIMORE.

We are indebted to "Scribner's Monthly" for the following remarks concerning this institution:—"By the will of John Hopkins, a merchant of Baltimore, the sum of \$7,000,000 was devoted to the endowment of a University and a Hospital, \$3,500,000 being devoted to each. This is the largest single endowment ever made to an institution of learning in this country. To the bequest no burdensome conditions were attached." . . . "The Physiological Laboratory of the Johns Hopkins has no peer in this country, and the other laboratories few equals and no superiors."

In the First Annual Report of the University (1876) we read:—"Early in the month of February, 1874, the Trustees of the University having been apprised by the Executors of Johns Hopkins, of the endowment provided by his will, took proper steps for organization and entering upon the practical duties of the trust, and addressed themselves to the selection of a President of the University. With this view the Trustees sought the counsel and advice of the heads of several of the leading seats of learning in the country, and, upon unanimous recommendation and endorsement from these sources, the choice fell upon Mr. DANIEL C. GILMAN, who, at the time, occupied the position of President of the University of California.

"Mr. Gilman is a graduate of Yale College, and for several years before his call to California, was a Professor in that institution, taking an active part in the organization and development of 'The Sheffield Scientific School of Yale College,' at New Haven. Upon receiving an invitation to Baltimore, he resigned the office which he had held in California since 1872, and entered upon the service of The Johns Hopkins University, May 1, 1875."—GALLOWAY CHESTON.

"In the hunt for truth, we are not first hunters, and then men; we are first and always men, then hunters."—D. C. GILMAN, Oct., 1883.

The "One Hundred Proofs that the Earth is Not a Globe" have been running around within the observation of the master huntsman and his men for a year or more: now let the hunters prove themselves to be men; and the men, hunters. It is impossible to be successful hunters for Truth, if Error be allowed to go scot-free. Nay, it is utterly impossible for the Johns Hopkins University to answer the purpose of its founder if its hunters for Truth do not first hunt Error with their hounds and hold it up to ridicule, and then, and always, keep a watchful eye for the Truth lest they should injure it by their hot haste or wound it with their weapons. Prof. DANIEL C. GILMAN, we charge you that the duties of your office render it imperative that, sooner or later, you lead your men into the field against the hundred proofs, to show the world that they are hunters worthy of the name—if, in your superior judgment, you decide that there is Error to be slain—or, show that your hunters are worthy of the better name of men, by inducing them to follow and sustain you, out of the beaten track, in your endeavors to uphold God's Truth, if, in your superior judgment, you tell them, "There is a Truth to be upheld!"

[End of the Appendix to the Fifth Edition. Nov. 9, 1886.]

PROFESSOR PROCTOR'S PROOFS.

"A proof, a proof!" cries student Brown; says Proctor, "Very well, If that is all you want, indeed, I've plenty I can tell: But really I have scarcely time or patience, now, to do it; You ought to know the earth's a globe, then, as a globe you'd view it. I knew it long ago: in truth, 't was taught me in my cot, And, then, too old was I to doubt,—too young to say 't was not!" "And you have never questioned it?" "Why should I, now, friend Brown? I took it all for granted, just as daddy laid it down. And as my duty clearly was,—no other way I saw it— And that's the reason why, of course, a globe I always draw it. And so you want a proof! Ah ha: just cross the broad Atlantic, And then a proof so strong you'll have, with joy, 't will send you frantic!" "You mean, that I shall see the ships come round the old earth's side— And up—and o'er the 'watery hill'—as into view they glide! No, Proctor, no: you say, yourself, the earth so vast in size is, The surface seems a level one—indeed, to sight, it rises. And ships, when coming into view, seem 'bearing down upon us.' No, Proctor, let us have a proof—no, no, come—mercy on us!" "Well, Brown, I've proofs that serve to show that earth, indeed, a ball 'tis; But if you won't believe them—well, not mine but yours the fault is. Why, everybody, surely, knows a planet must be round; And, since the earth a planet is, its shape at once is found. We know it travels round the sun, a thousand miles a minute, And, therefore, it must be a globe: a flat earth could n't spin it. We know it on its axis turns with motion unperceived; And therefore, surely, plain it is, its shape must be believed. We know its weight put down in tons exactly as we weigh'd it; And, therefore, what could clearer be, if we ourselves had made it? We know its age—can figures lie?—its size—its weight—its motion; And then to say, 'this all an eye,' shows madness in the notion. Besides, the other worlds and suns—some cooling down—some hot!— How can you say, you want a proof, with all these in the pot?" "Brown: just let us go ahead; don't interfere at all; Some other day I'll come and bring a proof that earth's a ball!" "No, Proctor, no:" said Mr. Brown; "'tis now too late to try it:— A hundred proofs are now put down (and you cannot deny it) That earth is not a globe at all, and does not move through space: And your philosophy I call a shame and a disgrace. We have to interfere, and do the best that we are able To crush your theories and to lay the facts upon the table. God's Truth is what the people need, and men will strive to preach it; And all your efforts are in vain, though you should dare impeach it. You've given half your theory up; the people have to know it:— You smile, but, then, your book's enough: for that will plainly show it. One-half your theory's gone, and, soon, the other half goes, too: So, better turn about, at once, and show what you can do. Own up (as people have to do, when they have been deceived), And help the searcher after Truth of doubt to be relieved. 'The only amaranthine flower is virtue;—don't forget it— 'The only lasting treasure, TRUTH:—and never strive to let it."

ODDS AND ENDS.

"We do not possess a single evident proof in favor of the rotation"—of the earth—"around its axis."—Dr. Shœpfer.

"To prove the impossibility of the revolution of the earth around the sun, will present no difficulty. We can bring self-evident proof to the contrary."—Dr. Shœpfer.

"To reform and not to chastise, I am afraid is impossible. . . To attack views in the abstract without touching persons may be safe fighting, indeed, but it is fighting with shadows."—Pope.

"Both revelation and science agree as to the shape of the earth. The psalmist calls it the 'round world,' even when it was universally supposed to be a flat extended plain."—Rev. Dr. Brewer. [What a mistake!]

"If the earth were a perfect sphere of equal density throughout, the waters of the ocean would be absolutely level—that is to say, would have a spherical surface everywhere equidistant from the earth's centre."—English "Family Herald," February 14, 1885!

"The more I consider them the more I doubt of all systems of astronomy. I doubt whether we can with certainty know either the distance or magnitude of any star in the firmament; else why do astronomers so immensely differ, even with regard to the distance of the sun from the earth? some affirming it to be only three, and others ninety millions of miles. — Rev. John Wesley, in his "Journal."

"I don't know that I ever hinted heretofore that the aeronaut may well be the most sceptical man about the rotundity of the earth. Philosophy imposes the truth upon us; but the view of the earth from the elevation of a balloon is that of an immense terrestrial basin, the deeper part of which is that directly under one's feet. As we ascend, the earth beneath us seems to recede—actually to sink away—while the horizon gradually and gracefully lifts a diversified slope, stretching away farther and farther to a line that, at the highest elevation, seems to close with the sky. Thus, upon a clear day, the aeronaut feels as if suspended at about an equal distance between the vast blue oceanic expanse above and the equally expanded terrestrial basin below."—Mr. E. M. Smith.

In the "Scientific American," for April 27, 1878, is a full report of a lecture delivered at Berlin, by Dr. Shœpfer, headed "Our Earth Motionless," which concludes thus:—"The poet Goethe, whose prophetic views remained during his life wholly unnoticed, said the following: 'In whatever way or manner may have occurred this business, I must still say that I curse this modern theory of cosmogony, and hope that perchance there may appear in due time some young scientist of genius who will pick up courage enough to upset this universally disseminated delirium of lunatics. The most terrible thing in all this is that one is obliged to repeatedly hear the assurance that all the physicists adhere to the same opinion on this question. But one who is acquainted with men knows how it is done: good, intellectual, and courageous heads adorn their mind with such an idea for the sake of its probability; they gather followers and pupils, and thus form a literary power; their idea is finally worked out, exaggerated, and with a passionate impulse is forced upon society; hundreds and hundreds of noble-minded, reasonable people who work in other spheres, desiring to see their circle esteemed and dear to the interests of daily life, can do nothing better or more reasonable than to leave to other investigators their free scope of action, and add their voice in the benefit of that business which does not concern them at all. This is termed the universal corroboration of the truthfulness of an idea!'"

SECOND EDITION—Enlarged.

ZETETIC COSMOGONY:

OR

Conclusive Evidence

THAT THE WORLD IS NOT A

ROTATING—REVOLVING—GLOBE,

BUT

A STATIONARY PLANE CIRCLE.

By "*RECTANGLE*."

Durban, Natal.

T. L. CULLINGWORTH, PRINTER AND PUBLISHER, 40, FIELD STREET.

—
1899.

PREFACE TO SECOND EDITION.

Since the first edition of this work—an unpretentious pamphlet of 48 pages—was published, so much interest in the subject has been manifested, that a second edition is without doubt called for. In fact, long after the first edition was exhausted, letters from various parts of the world, were received, asking for copies, which, to our regret, could not be supplied.

In that pamphlet very much of the evidence we had accumulated from various sources had to be omitted, so as to reduce what otherwise would have been a bulky volume to a short treatise; retaining sufficient evidence to convince the minds of those who would take cognizance of and duly estimate proved facts of nature. Our labours have not been in vain. Many have been enabled to see through the delusions of modern astronomy. Letters from various parts testify that, in some cases, men and women have begun to make use of their brain-power, which had been stunted and dwarfed by acceptance, without the slightest proof, of the unscientific, unreasonable, unnatural, and infidel teachings of men foisted upon a credulous public in the name of “Science.” Others again, tell that the writers have thrown to the moles and to the bats the world-wide and almost universally-believed hoax that we are living on a whirling sea-earth

globe, revolving faster than a cannon-ball travels, rushing through "space" at a rate beyond human power to conceive, and flying—with the whole of the so-called solar-system—in another direction twenty times the speed of its rotation.

To the Editors of newspapers, who, whether favourably or unfavourably, reviewed the pamphlet, our thanks are due, and now respectfully tendered.

This edition is sent forth with the assurance of the Divine blessing and the firm conviction that TRUTH IS STRONG AND MUST PREVAIL.

T.W.

12, CASTLE BUILDINGS,
Durban, Natal,
South Africa,

November, 1899

INTRODUCTION. .

It will be noticed that the style of this volume differs considerably from the first edition. In that edition we divided the book into four parts, viz.: Scientific Assertions, Bible Statements, Natural Proofs, and Application and Conclusion.

The first of these was covered by extracts from well-known astronomical works; the second was filled with Bible quotations, the direct opposite of the astronomical speculations; the third division contained many proofs of the impossibility of the truth of the globe theory; the last division being made up of the logical arguments founded on the first three.

For convenience of reference we have arranged the present edition alphabetically.

In this way any particular branch of the subject can be found without looking up the index, and something new is found on every page.

Briefly, modern astronomical teaching affirms that the world we live on is a globe, which rotates, revolves, and spins away in space at brain-reeling rates of speed; that the sun is a million and a-half times the size of the earth-globe, and nearly a hundred million miles distant from it; [that the moon is about a quarter the size of the earth; that it receives all its light from the sun, and is thus only a reflector, and not a giver, of light; that it attracts the body of the earth and thus causes the tides;] that the stars are worlds and suns, some of them equal in importance to our own sun himself, and others vastly his superior; that these worlds, inhabited by sentient beings, are without numbers and occupy space boundless in extent and illimitable in duration; the whole of these interlaced bodies being subject to, and supported by, universal gravitation, the foundation and father of the whole fabric.

To fanciful minds and theoretical speculators, the so-called "science" of modern astronomy furnishes a field, unsurpassed in any science for the unrestrained license of the imagination, and the building up of a complicated conjuration of absurdities such as to overawe the simpleton and make him gape with wonder; to deceive even those who truly believe their assumptions to be facts, and to "make men doubt Divine Revelation with as little discrimination as they were formerly called upon to believe."

If the reader will carefully follow and weigh the evidence in the following chapters, he cannot fail to be delivered from the thralldom of popular credulity and led to seek the truth for himself.

Current science declares that the earth was once shot off from the sun; a piece of molten rock, which, by universal attraction became larger, "by indraughts from without," as the late R. A. Proctor assures us. This molten mass took 350,000,000 years to cool down for protoplasm to get a footing, which took millions of years "by evolution and selection" to produce a Darwinian ape. Evolution and selection allied to and combined with "the survival of the fittest" again took many millions of years to evolve "primeval" man, many ages again elapsing before historical man was produced.

There are four "bodies," according to the late R. A. Proctor, which represent four stages of what we may term astronomical progression, as follow:—

1. The moon was once inhabited, but is now a chaotic mass.
2. The earth is inhabited. It was once like the planet Jupiter. Earlier still it was like the sun, and will become like the moon now is.
3. Jupiter was once like the sun. It is being prepared for inhabitants. When inhabited it will be like the earth. When its race as an inhabited world has been run, it will become like the moon.
4. The sun will become like Jupiter, and another sun will have taken its place. Later it will become like the earth, and will then be inhabited. Later still it will become chaotic like the moon; and so on for countless ages, in fact for ever.

What a grand conception! Yea, rather, what a grand perversion of the reasoning powers, and what stultification of common-sense. What an abuse of precious gifts in order to satisfy a fertile imagination, and supply idle curiosity with something new in the "domain of science."

No one who reads the Bible but can see how these unfounded speculations are diametrically opposed to its plain teaching. The science of the nineteenth century, and the science of the Bible are totally at variance. If the one be true, the other is necessarily false. Which is it? Let the evidence here placed before the reader answer the question. Let honest-minded men and women who read these pages learn the truth for themselves by practical investigation into the facts herein set forth, which we challenge the whole scientific world to successfully dispute.

We court no favour and fear no foe, scientific or otherwise. All we ask is careful attention and practical investigation; we have no fear as to the logical conclusion which shall be arrived at.

CONTENTS.

Assumptions	3
Age of the Earth	4
Aëronautics	7
Contrasts	8
Contradictions	11
Circumnavigation	18
Curvature	21
Canals	23
Disappearance of Ships	24
Distances	28
Fluids	31
Figure of the Earth	33
Growth of the Earth... ..	35
Gravitation	36
Geology	46
Horizon, The	56
Level On the Term	56
Lighthouses	58
Midnight Sun, The	62
Motions of the Earth	64
Moon, The	70
Moon, Eclipses of the	74
Magnetism	83
Navigation	86
Pendulum, The	99
Plurality of Worlds, The	102
Planets, The	104
Parallel Lines. On	105
Railways	107
Rivers	110
Ridicule	110
Sun, The	112
Sun's Distance	113
Sun's Diameter	119
Stars, The	120
Star Distances	121
Season's, The... ..	124
Signals... ..	125
Surveying	126
Science	126
Tides, The	129
Ultimate Conclusion, The	131

APPENDIX.

Earth an Irregular Plane	153
Evolution	154
New Scriptures, The	155
Truth will Conquer	157
Glory of God, The	159
How Old is the Earth ?	162
Our Earth Motionless	167
Vindication of the Divine Cosmogony	185

ERRATA.

Introduction.—1st Page, line 16 from bottom, for *numbers* read *number*.

Page 5.—Line 13 from bottom, for *in its b:st dress we are* read *in its best dress, we are &c.*

Page 19.—Begin 2nd line from bottom with *will tell you* and commence last line with *the world is a globe*.

Page 31.—Line 20 from top, for *satute* read *statute*.

Page 73.—Line 23 from top, for *place* read *places*.

Page 104.—Bottom line, for *everthing* read *everything*.

Page 113.—Line 2 from bottom, for *1869* read *1769*.

Page 141.—Line 5 from bottom, for *supply* read *apply*.

Page 165.—Line 6 from top, for *50* read *500*.

Page 183.—Line 12 from bottom, for *gigantic an numerous* read *gigantic and numerous*.

ZETETIC COSMOGONY:

OR

CONCLUSIVE EVIDENCE

THAT THE WORLD IS NOT A

ROTATING—REVOLVING—GLOBE.

ASSUMPTIONS.

In order to account for natural phenomena in keeping with the assertions of the learned, many hypotheses have to be laid down, and many unfounded assumptions are absolutely necessary to support the unsound fabric of astronomical imagination.

In "Modern Science and Modern Thought," by S. Laing, the following occurs on page 51 :—

"What is the material universe composed of? Ether, Matter, and Energy. Ether is not actually known to us by any test of which the senses can take cognizance, but it is a sort of *mathematical substance* WHICH WE ARE COMPELLED TO ASSUME IN ORDER TO ACCOUNT for the phenomena of light and heat."

Whatever explanation may be furnished regarding light and heat on this basis, must be discarded as utterly untrustworthy, because the premises are assumed.

Once upon a time it was stated that "the stars were motionless," but as soon as assumption was allowed to talk, the scene was changed, for, as *Science Siftings* informs us (Vol. 6, page 39),

"as soon as it was CONJECTURED that the stars were subject to the law of gravitation, it was *inferred* that they were not motionless."

Professor Huxley had to resort to assumption to account for the disappearance of ships at sea, although had he known the truth of the matter, or taken the trouble to enquire, his unwarranted assumptions would have been totally unnecessary.

He says :

“ We assume the convexity of the water, because we know of no other way to explain the appearance and disappearance of ships at sea.”

What learning! What profound wisdom! If we “ know of no other way ” it is better to admit the fact and wait until we “ have found out some other way ” to explain the difficulty, if there is any. Knowledge is gained by practical investigation and experience, and has no need of the assistance of assumption to provide an excuse for ignorance. If water could be proved to be convex, there would be no need to assume it to be so. We should have many proofs and abundant evidence of the fact. But the fact that water has been proved to be level, hundreds of times, makes it necessary for those who refuse to believe proved facts which tell against their theory, to resort to assumption to maintain their unreasoning position. And yet this same Professor, in his book “ Science and Culture ” says

“ the assertion which outstrips evidence is not only a blunder but a crime.”

The assertion, therefore, that water is convex against proof furnished many times over that it is level, is not only a blunder, but a crime.

AGE OF THE EARTH.

This is a subject which has been much speculated upon. I shall quote a few of the more prominent assumptions. Sir Robert Ball, in his “ Story of the Heavens,” pages 169 and 170, tells us that

“ We cannot pretend to know how many thousands of millions of years ago this epoch was, but *we may be sure* that earlier still *the earth was even hotter*, until at length we seem to see the temperature increase to a red heat, from a red heat we look back to a still earlier age *when the earth was white hot*, back again till we find the surface of our now solid globe was ACTUALLY MOLTEN.”

But imagination goes still further than this. In “ Our place among Infinities,” by R. A. Proctor, pages 9 and 10, we find the following :—

“ Let it suffice that we recognise as one of the earliest stages of *our earth's* history, her condition as a *rotating* MASS OF GLOWING VAPOUR, capturing then as now, but far more

actively then than now, masses of matter which approached near enough, and growing by these continual indraughts from without."

How we are to "recognise" that the earth was once a rotating mass of vapour, we are not told. On what evidence the recognition rests, is not stated. Perhaps it is not too much to *assume* that this is like most other assumptions of the astronomical schools, without the slightest vestige of possibility, to say nothing of probability. Sir R. Ball tells us that "we may be sure" that the earth was once "actually molten"; but on what provable data the "surety" of this "actuality" rests we are left to the foggy mazes of imagination to discover. But imagination, assisted by assumption, will account for anything, and so we are told that it "took 350,000,000 years for the earth to cool down from a temperature of 2,000 centigrade to 200." Proctor says that Bischoff has shown this, and so we ought to be sure enough. Were similar ridiculous statements made in relation to any other science than Astronomy or Geology, I believe the general reader would dismiss them at sight. But because they are made in a "domain of science" where the general reader, in most cases, cannot follow, they are allowed to pass as the genuine product of learning and investigation; whereas they are at best but wild and utterly impossible theories. In "Modern Science and Modern Thought," page 44, we are informed that

"It is right, however, to state that ALL MATHEMATICAL CALCULATIONS OF TIME BASED ON THE ASSUMED RATE AT WHICH COSMIC MATTER COOLS INTO SUNS AND PLANETS, AND THESE INTO SOLID AND HABITABLE GLOBES, ARE IN THE HIGHEST DEGREE UNCERTAIN."

Thus, after all the labour to establish a theory, allied with much skill in setting it forth, in its best dress, we are calmly assured that all these tall figures and imaginations are based on premises which are in the highest degree uncertain! If evidence for rejecting these fanciful hypotheses summarily and *in toto* were wanting, surely it is now furnished to satisfaction. Not only are these "mathematical calculations" of assumed premises, "in the highest degree uncertain," but they are to be classed with the tomfooleries of the age, and reckoned among the many and impossible absurdities of the present day.

One of the chief of recent speculations regarding the earth, is that it is a body like the planets, because it has *been shown* that the sun and the stars are of the same com-

stituent parts as the earth. Iron, Salt, &c., are said to be elements of the sun's composition, and as the earth contains these and other minerals, it is a globe or planet like the other heavenly bodies which contain the same metals. What is known as

SPECTRUM ANALYSIS

is relied upon as proving this. A prism is placed in position so as to intercept the sun's rays, and the colours seen through this instrument, red, orange, yellow, blue, are said to be the result of the various metals contained in the sun in a state of fusion, emitting their several colours in the combined sunlight, which total light is decomposed into its component colours by the prism.

With the object of testing the conclusions arrived at by the learned relative to spectrum analysis, several experiments were made by the writer. The light of the sun on a clear day, about noon, seen through the prism disclosed the various colours that can be seen through this instrument. On a hazy day before sunset the colours seen were the same but very faint. Light from a lighthouse and a star seen through the prism, showed the colours to be the same, the colour from the light of the star being much less brilliant than that from the lighthouse. Light from a paraffine street lamp gave the same result as light from a star or the sun, only much fainter. Then the electric light was tried. A large street lamp of great power and several others of less power gave the same result as the sun, star, lighthouse, and street lamp, but in various degrees of brilliancy according to the power of the light. Even a candle gave a very faint yellow-blue tinge, so slight that it had to be looked at for some time before anything but blue was apparent.

If, therefore, it be argued that spectrum analysis proves that the sun is made of the same metals as we find in the earth, and that, therefore, the earth is a product of evolution then it is equally clear that the electric light and the glass shade of the lamp which encases it are really composed of iron and various other metals in a state of fusion, constituting indeed, a globe of glowing vapour, and not glass, carbon, &c., at all. It is also as reasonable to conclude that the paraffine lamp and the candle are composed of metals in a state of fusion and that there is in reality no paraffine, no glass, no tallow, and no wick. That is to say, known facts must be thrown aside, common-sense stultified, and reason

dethroned in order to bolster up the unprovable assumptions of modern science relative to the doctrine of evolution as applied to the earth and the heavenly bodies.

ÆRONAUTICS.

If the world be a ball, as Sir R. Ball gravely informs us, the æronaut should be one of his most ardent supporters, as the highest part of the "surface of the globe" would be directly under the car of a balloon, and the sides would fall away or "dip" down in every direction. The universal testimony of æronauts, however, is entirely against the globular assumption, as the following quotations show. The *London Journal* of 18th July, 1857, says:—

"The chief peculiarity of the view from a balloon at a considerable elevation was the altitude of the horizon, which remained practically on a level with the eye at an elevation of two miles, causing the surface of the earth to appear *concave* instead of convex, and to recede during the rapid ascent, whilst the horizon and the balloon seemed to be stationary."

J. Glaisher, F.R.S., in his work, "Travels in the Air," states: "On looking over the top of the car, the horizon appeared to be on a level with the eye, and taking a grand view of the whole visible area beneath, I was struck with its great regularity; all was dwarfed to one plane; it seemed too flat, too even, apparently artificial." In his accounts of his ascents in the air, M. Camilla Flammarion states: "The earth appeared as one immense plane richly decorated with ever-varied colours; hills and valleys are all passed over without being able to distinguish any undulation in the immense plane."

Mr. Elliott, an American æronaut, says: "I don't know that I ever hinted heretofore that the æronaut may well be the most sceptical man about the rotundity of the earth. Philosophy forces the truth upon us; but the view of the earth from the elevation of a balloon is that of an immense terrestrial basin, the deeper part of which is directly under one's feet.—*Zetetic Astronomy*. Page 37.

In March, 1897, I met M. Victor Emanuel, and asked him to give me an idea of the shape of the earth as seen from a balloon. He informed me that, instead of the earth declining from the view on either side, and the higher part being under the car, as is popularly supposed, it was the exact opposite; the lowest part, like a huge basin, being imme-

diately under the car, and the horizon on all sides rising to the level of the eye. This, he admitted, was exactly what should be the appearance of a plane viewed from a balloon.

It is almost needless to say that a globe would present a totally different appearance, the highest part being directly under the car.

CONTRASTS.

If the earth be the globe of popular belief, the same amount of heat and cold, summer and winter, should be experienced at the same latitudes North and South of the Equator. The same number of plants and animals would be found, and the same general conditions exist. That the very opposite is the case, disproves the globular assumption. The *Great Contrasts* between places at the same latitudes North and South of the Equator, is a strong argument against the received doctrine of the rotundity of the earth.

From *The Geological Journal* for November, 1893, I extract the following:—

"A Voyage towards the Antarctic Sea," report by Wm. S. Bruce. "On January 12th, 1893, we saw what appeared to be high mountainous land and glaciers stretching from about 64°.10 west to about 65°.30 south, 58° west; this, I believe, may have been the eastern coast of Graham's Land, which has never before been seen. But it would be unwise to be too certain, for *it must have been 60 miles distant.*"

"METEOROLOGY.—Periods of fine calm weather alternate with very severe gales, usually accompanied by fog and snow, the barometer never attained 30 inches. The records of air temperature are very remarkable; our lowest temperature was 20°.8 Fahr., our highest 37°.6 Fahr. only a difference of 16°.8 Fahr. in the total range for a period extending slightly over two months. Compare this with our climate; where in a single day and night you may get a variation of more than twice that amount. The average temperatures show a still more remarkable uniformity."

"December averaged 31°.14 Fahr. for one hundred and fifteen readings; January 31°.10 Fahr. for one hundred and ninety-eight readings; February 29°.65 for one hundred and sixteen, a range of less than 1½° Fahr.

This I consider to be very significant, and worthy of special attention by future Antarctic explorers, for may it not indicate a similar uniformity of temperature through-

out the year. Antarctic cold has 'been much dreaded by some; the four hundred and twenty-nine readings I took during December, January, and February show an average temperature of only $30^{\circ}.76$ Fahr.; *this being in the very height of summer in latitudes corresponding to the Faroe Islands in the north*, but I believe the temperature of winter will not vary very much from that of summer. This uniformity of temperature partly accounts for the great accumulation of ice which is formed not on account of the great severity of the winter, but *because there is practically no summer to melt it.*"

"Mr. Seebohm has vividly pictured the onrush of summer in the Arctic; *but how different in the Antarctic.* There, there is eternal winter, and snow never melts. As far north as a man has travelled he has found reindeer and hare basking in the sun, and country brilliant with rich flora; *within the Antarctic circle no plant is to be found.*"

REPORT BY C. W. DONALD, M.B., C.M.

"On the passage out, we, on board the *Active*, touched at the beautiful island of Madeira, in October, and two more months landed us in the barren Falkland Islands. Sailing thence on December 11th, we crossed the stormy waters to the east of Cape Horn, and saw our first iceberg on December 18th. On the same day we sighted Clarence Island—one of the South Shetlands. These are called after our own Northern Shetlands, and the part sighted by us lies only some 60 miles nearer the pole. *But what a difference between the two places.* Our own Shetlands bright with ladies' dresses in light summer garments, and carrying tennis racquets and parasols; the South Shetlands, *even in the height of summer*, clad in an almost complete covering of snow, only a steep cliff or bold rock standing out in deep contrast here and there, the only inhabitants being birds or seals; and even the bird life, with the exception of the penguins, is scanty. Sir James Ross, on his third voyage, entered the ice at nearly the same spot, and, fifty years before—all but a week—had sheltered from a westerly gale under the inhospitable shores of Clarence Island. Its highest point stands 4,557 feet above sea level."

The following from "Polar Explorations," read before the Royal Dublin Society, is taken from "Zetetic Astronomy," by "Parallax."

"On the South Georgias, in the same latitude as Yorkshire in the North, Cook did not find a shrub big enough to make a

toothpick. Captain Cook describes it as 'savage and horrible.' The wild rocks raised their lofty summits till they were lost in the clouds, and the valleys lay covered with everlasting snow. Not a tree was to be seen; not a shrub even big enough to make a toothpick. Who could have thought that an island of no greater extent than this (Isle of Georgia), situated between the latitude of 54 and 55 degrees, should in the *very height of summer*, be in a manner wholly covered many fathoms deep with frozen snow? The lands which lie to the south are doomed by nature to perpetual frigidness—never to feel the warmth of the sun's rays; whose horrible and savage aspect I have not words to describe. The South Shetlands, occupying a corresponding latitude to their namesakes in the north, present scarcely a vestige of vegetation. Kerguelen, as low as latitude 50 degrees south, boasts 13 species of plants, of which only one, a peculiar kind of cabbage, has been found useful in cases of scurvy; while Iceland, *15 degrees nearer to the pole in the north*, boasts 870 species. Even marine life is sparse in certain tracts of vast extent, and the sea bird is seldom observed flying over such wastes. The contrasts between the limits of organic life in Arctic and Antarctic zones is very remarkable and significant. Vegetables and land animals are found at nearly 80 degrees in the north; while, from the parallel of 58 degrees in the south, the lichen, and such-like plants only, clothe the rocks, and seabirds and the cetaceous tribes alone are seen upon the desolate beaches." "McLintock describes herds of reindeer—a perfect forest of antlers—moving north in the summer the eider duck and the brent goose through the air; the unwieldy family of the cetacea through the waters; the Arctic bear upon the ice; the musk ox and reindeer along the land—all wend their way northward at certain seasons Now these indications are absent from the southern zone, as is also the inhabitation of man. The bones of musk oxen, killed by the Esquimaux, were found north of the 79th parallel; while in the south, man is not found above the 56th parallel of latitude."

This is supported by the following from the *Western Christian Advocate*, of 10th February, 1897, copied from *Appleton's Science Monthly*.

"The distinctiveness of the Antarctic climate as compared with the Arctic is found in the relations of both the summer and the winter temperatures. The high summer heat of the north, which in the few months of its existence has the energy to develop that lovely carpeting of grass and flowers which gives to the low-lying lands, *even to the 82nd parallel of latitude*, a charm equal to that of the upland meadows of Switzerland, is in a measure wanting in the south; in its place frequent cold and dreary fogs navigate the atmosphere, and render dreary and desolate a region that extends far into what may be properly designated the habitual zone. The fields of anemones, poppies, saxifrages, and mountain pinks, of dwarf birches and willows, ARE REPLACED BY INTERMINABLE SNOW AND ICE, with only here and there bare patches of rock, to give assurance that something underlies the snow covering.

Man's habitations in the northern hemisphere extend to the 78th parallel of latitude and formerly extended to the 82nd ; in the southern hemisphere they find their limit in Fuegia, in THE FIFTY-FIFTH PARALLEL fully 350 miles near the equator than where, as in the Shetland Islands, ladies in lawn dresses disport in the game of tennis. And still, 700 miles further from the equator, in Siberia, Nordenskjöld found forests of pine rising with trunks 70 to 100 feet in height."

In the "Voyage of a Naturalist," by C. Darwin, pages 210 and 212, we are informed that

"One side of the harbour is formed by a hill about 1,500 feet high, which Captain Fitzroy has called after Sir J. Banks, in commemoration of his disastrous excursion which proved fatal to two men of his party, and nearly so to Dr. Solander. The snow-storm which was the cause of this misfortune, happened in the middle of January, corresponding to our July in the latitude of Durham."

"We were detained here several days by bad weather. The climate is certainly wretched. The summer solstice is now (23th December) passed, yet every day snow fell on the hills, and in the valleys there was rain accompanied by sleet."

It is utterly impossible to shut one's eyes to the fact that these evidences furnish indisputable proof that the figure of the earth cannot be globular. If it were of that shape the same conditions would be found at equal latitudes north and south, which we have seen is not the case.

CONTRADICTIONS.

The grave contradictions that exist among the recognised teachers of astronomical science, ought to cause a thinking man to pause before accepting a theory about which no two of its exponents may be found to agree.

Sir Isaac Newton, in his "Principia," resuscitated the fundamental proposition of Pythagoras thus—"The sun is the centre of the solar system and immovable." Since then Professor Herschel discovered that the sun was "*not immovable*."

In regard to the atmosphere of the planet Mars, the same contradiction is manifest. In the *Christian Million* (San Jose) of 9th August, 1894, we find that

"Mr. Norman Lockyer has been telling an interviewer that Mars is like us in many respects. IT HAS AN ATMOSPHERE LIKE OURS."

The *Standard* of 18th August, 1894, says:—

“Professor Campbell, of the Lick Observatory, announces that he has demonstrated that MARS presents NO EVIDENCE OF HAVING AN ATMOSPHERE.”

Then Mr. J. Gillespie, in his “Triumph of Philosophy,” page 89, comes to the rescue and says

“As to the planets being inhabited, if we take refraction into account, we shall find that *there is not such a thing as atmosphere near them*; for instance, in an eclipse of the moon, especially at her apogee, the earth is brought to a mere point by refraction, caused by the air of the earth, and were the moon a little further away from this point, would be brought to nothingness; that is although the earth were exactly in a straight line between the sun and moon, the earth would not even show a spot on the moon's disc. . . . Now by this same rule, if either Mercury or Venus had any atmosphere, they could *never* be seen crossing the sun's disc. I think this is satisfactory proof that THEY HAVE NO ATMOSPHERE, and cannot, therefore, be inhabited.”

After all this delightful uncertainty, a writer in *Knowledge* of February, 1895, says

“The interesting chapter on solar theories is well fitted to serve as a lesson in *modesty*, so diverse and conflicting are the various hypotheses, *so difficult to harmonise*, are the observed facts.’

When we come to consider the atmosphere that concerns us most, the same contradictions are evident. Sir David Brewster, in his “More Worlds than One,” tells us that the atmosphere of the earth extends for about 45 miles. In *Science Siftings* of 18th March, 1893, the following occurs:

“We may *infer* that a few hundred miles embrace all the gaseous envelope of the globe.”

And in “Elementary Physiography,” page 293, we are told that

“*The height of the atmosphere is not known with any certainty. There is probably no fixed limit to the atmosphere.*”

It is a fair inference from these contradictory statements that present day scientists (so-called) *do not know anything* about the height of the earth's atmosphere.

Many men of thought and learning have scouted the ideas imposed upon us by Sir Isaac Newton, of which the following is a sample:—

“The repetition of a blunder is impertinent and ridiculous. To liberate oneself from an error is difficult, sometimes indeed impossible for even the strongest and most gifted minds. But to take up the error of another, and persist in it with stiff-necked obstinacy, is a proof of poor qualities. The obstinacy of a man

of originality when he errs may make us angry, but the stupidity of the copyist irritates and renders us miserable. And if, in our strife with (Sir Isaac) Newton, we have sometimes passed the bounds of moderation, the whole blame is to be laid upon the school of which Newton was the head, whose incompetence is proportional to its arrogance, whose laziness is proportional to its self-sufficiency, and whose virulence and love of persecution hold each other in perfect equilibrium." "Through the whole of Newton's experiments there runs a display of pedantic accuracy, but how the matter really stands, with Newton's gift of observation, and with his experimental aptitudes, every man possessing eyes and senses may make himself aware. It may be boldly asked, where can the man be found, possessing the extraordinary gifts of Newton, who would suffer himself to be deluded by such a *hocus pocus* if he had not in the first instance wilfully deceived himself? Only those who know the strength of self-deception, and the extent to which it sometimes trenches on dishonesty, are in a condition to explain the conduct of Newton and of Newton's school. To support his unnatural theory, Newton heaps fiction upon fiction, seeking to dazzle when he could not convince."—GOETHE. *Proceedings of the Royal Institution of Great Britain*. Vol. ix., part iii., p. 353-5.

Dr. W. Friend says

"It has, over and over again, been the hope and expectation of intelligent and unprejudiced men that some less extravagant and more intelligible system would, sooner or later, be found as a substitute for the mathematical romance with which Newton has favoured the world. This name has been the sanction for a device, which, the more it is examined, excites the more astonishment at its adoption by men of research and observation."

Then, again, Kepler's laws, said to be so well established and so absolutely necessary to the truth of the Newtonian hypothesis, when weighed in the balance by competent judges, are contradicted and set aside by a stroke of the pen. Professor W. B. Carpenter, in the *Modern Review* for October, 1880, says:

"It was not until twelve years after the publication of his first two laws, that Kepler was able to announce the discovery of the *third*. This, again, was the outcome of a long series of GUESSES, and what was remarkable as to the error of the idea which suggested the second law to his mind, was still more remarkable as to the third; for not only, in his search for the 'harmony' of which he felt assured, did he proceed on the erroneous notion of a whirling force emanating from the Sun, which decreases with increase of distance, but he took as his guide ANOTHER ASSUMPTION NO LESS ERRONEOUS, viz., that the *masses* of the Planets increase with their distances from the Sun. In order to make this last fit with the facts he was driven to ASSUME a relation of their respective *densities*, which we now know to be UTTERLY UNTRUE; for, as he himself says, 'unless we ASSUME this proportion of the densities, the law of

the periodic times will not answer.' Thus, says his biographer, 'three out of the four *suppositions* made by Kepler to explain the beautiful law he had detected are now **INDISPUTABLY KNOWN TO BE FALSE**, what he considered to be the *proof* of it being only **A MODE OF FALSE REASONING** by which 'any required result might be deduced from any given principles.'

Newton's theory and Kepler's laws are the chief foundation stones of modern astronomy, and when these are shaken, the whole fabric reels and staggers like a drunken man; until, sooner or later it will find a grave in the oblivion that it so well merits.

The *Daily Chronicle* of 8th April, 1891, says :

"It may be a surprise to find that we are still imperfectly acquainted with the figure of the Earth."

The *Ceylon Independent*, of 23rd December, 1893, has the following :—

"This question seems to be still agitating the Austrian Government, and more than one Austrian man-of-war that has called here lately has had an officer on board whose special commission was to make observations for the purpose of ascertaining the attraction of the earth in order thereby to arrive at the exact shape of the globe. An officer thus employed is on the Austrian steamer *Fasana*, who, since the vessel's arrival, has spent a good deal of time at the National Bank, where a room was allotted him for the purpose of adjusting his instruments. An officer engaged on similar duty was on the *Kaiserin Elizabeth* the other day."

Von Gumpach, in his work "Figure of the Earth," tells us how the men of science made the world a globe.

"The earth of the Newtonian theory, is the mere creation of the fancy. Its shape has been determined, partly of imaginary and partly of positively erroneous elements; and results of subsequent experiments and measurements have, by means of purely mathematical factors and tentative formulas been adapted to its **PRE-SUPPOSED FIGURE**."

Mr. J. Gillespie, who believes that the earth is a globe suspended in space, with no revolution round the sun, says, in his "Triumph of Philosophy," page 6.

"I can challenge any astronomer in Great Britain on any point in theoretical astronomy, and prove that *the present theory is a regular burlesque*, A HOAX and A SWINDLE. If it is a sin to tell a lie, what must be the doom of men who teach generation after generation one of the most glaring and degraded falsehoods ever laid before mankind."

Dr. Lardner, in his *Museum of Science*," says

"All the diurnal changes of appearances, presented by the firmament, the risings and settings of the sun, moon and stars,

and their varying appearances in different latitudes, admit of being explained with equal precision and completeness, either by supposing the universe to revolve daily round the earth, or the earth to revolve daily on its axis."

Then as to the velocity of light (if light travels at all), the same glorious mixture and uncertainty again present themselves. Guillemin ("The Heavens") conjectures that light travels at the rate of 192,000 miles a second. M. Leon Foucault guesses 184,000 miles; Sir R. Ball 180,000 miles; the Editor of *Science Siftings* assumes (first time) 186,000 miles, second time 196,000 miles. This is all contradicted by a writer in the *English Mechanic* of 27th July, 1894, who says:

"I BELIEVE NO ONE NOW HOLDS THE VIEW THAT LIGHT ACTUALLY MOVES."

Most people think that there is only one school of Astronomy in vogue, whereas there are at least four, all at loggerheads with each other, (1) The Ptolemaists, represented by J. Gillespie, of Dumfries, who suppose the "earth" globe a centre for the revolution of the sun, moon, and stars; (2) The Koreshans of America, who suppose the "earth" a hollow globe for us to live inside; (3) The Newtonian Copernicans, who suppose the sun a centre, keeping the planets whirling in orbits by gravity; and (4) the Cartesian Copernicans, who suppose the planets to whirl round the sun, without the necessity of gravity, Sir R. Phillips heading up this school.

Astronomy will sometimes summon Geology to its aid, when difficult problems are awaiting solution, but astronomers generally claim that when the two sciences disagree, astronomy is the *safest* ASSUMPTION. S. Laing, however, in his "Modern Science and Modern Thought" claims superiority for Geology. On pages 48 and 49, he says:

"The conclusions of Geology, at any rate up to the Silurian period are *approximate facts* and NOT THEORIES, while the astronomical conclusions are THEORIES, *based on data so uncertain*, that while in some cases they give results *incredibly short*, like that of 15,000,000 years for the whole past process of the formation of the solar system, in others they give results almost *incredibly long*, as in that which supposes the Moon to have been thrown off when the earth was rotating in three hours. the *safest course*, in the present state of our knowledge seems to be to ASSUME THAT GEOLOGY REALLY PROVES the duration of the present order of things to have been *somewhere* over 100,000,000 years."

Thus one fable (falsely called science) exposes another fable of about the same value. "The *safest course* in the

present state " of the utter ignorance of " science " as to the matters here in dispute, is certainly to reject both these delusions, and seek the truth for ourselves.

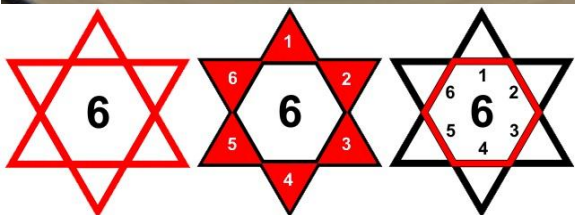
Geological blunders have been many and frequent, but they are seldom allowed to reach the eyes or ears of those who are duped into believing all this imposing " science " teaches. The *Daily Chronicle* of 14th January, 1893, speaks pretty plain, and proves the truth of the above remarks. The paper says :

" A GEOLOGICAL BLUNDER."

" There is in *Nature* an article by a French writer on Sir Archibald Geikie, Director-General of the Geological Survey, which is just now causing a good deal of talk amongst English men of science. Of course, nobody is surprised at the fulsome-ness of M. de Lapparent's eulogy. As *Nature* seems to exist for pushing the great official scientific syndicate of Huxley, Hooker, Geikie and Co., Limited—very strictly limited—which may be said to " run " science in England, M. de Lapparent would probably not have been *permitted* to write anything about a member of it unless it was fulsome. What has really amazed people is the audacity with which a famous historic bungle on the part of the Geological Survey is glossed over, and the Director-General not only credited with the work of those who exposed and corrected it, to his utter discomfort, but actually covered with laurels for thus winning one of the most glorious scientific conquests of the century. The whole thing is delightfully characteristic of State-endowed science in England. If you are one of the official syndicate who " run " it, you may blunder with impunity and make your country ridiculous at the taxpayers' expense. Scientific men who can correct you shrink from the task. They know that the syndicate can *boycott* them, and by *intrigue* keep them out of every honour and profit, and that the syndicate's satellites can write and *shout down* everywhere independent non-official critics. They also know that if, perchance, some particular intrepid person does succeed in exposing one of this syndicate, they can always, by the same means—after the public has forgotten the incident—suppress him, and boldly appropriate to themselves the credit of his work."

" The geological secret of the Highlands, with the unlocking of which Sir Archibald Geikie is now credited, was really made a puzzle for more than half a century by the blundering of the Geographical Survey and Director-General Sir Roderick Murchison—and famous courtier and " society " geologist of the last generation. In the Highlands he saw gneisses and ordinary crystalline schists resting on Silurian strata, and he foolishly held the sequence to be quite normal. The schists, he would have it, were not archaic formations, but only meta-morphosed Silurian deposits. He also held that primitive gneiss was not part of the molten *crust of the globe*, but only sediments of sand and mud altered by intense pressure and heat. Murchison, not to put too fine a point on it, " bounced " everybody into accept-*ing this absurd theory*; and the whole forces of the Geological Survey, with its official and social influence, together with the

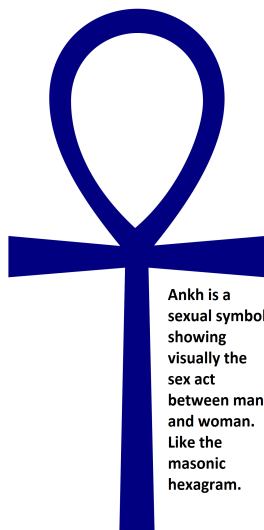
**HIDDEN HEXAGRAM IN
PHOTOSHOP FAKE PIC BY NASA
ON SATURN(SATAN)**



6 POINTS

6 MINI TRIANGLES

6 SIDED POLYGON



Ankh is a sexual symbol, showing visually the sex act between man and woman. Like the masonic hexagram.

unscrupulous power of the official syndicate which then, as now *jobbed* science wherever it had a State endowment, were spent in perpetuating the blunder and blasting the scientific reputation of whoever scoffed at it. But in the Natural History School of Aberdeen University it *was* scoffed at. The late Dr. Nicol, Professor of Natural History in Aberdeen, proved that Murchison and the Survey were *wholly wrong*, his proof being as complete as the existing state of science allowed. When he died, Dr. Alleyne Nicholson took the same side, and for years, in relation to this grand problem, it was Aberdeen University against the world. . . . In shouting the last word no voice has been louder than Sir Archibald Geikie's. It is therefore diverting to find his official biographer stating in *Nature* that all the time he was wrestling *in foro conscientiae* with doubts as to the soundness of the official position, and that finally "his love of truth" prompted him to order a re-survey of the whole Highland region. In plain English, the taxpayer, having had to pay for Murchison's bungling survey, was, because of his successor's "love of truth," to enjoy the luxury of paying over again to correct it.

The real truth, however, is this:—When it was supposed that the Aberdonians were finally crushed, there arose in England a young geologist called Lapworth, who had the courage to revise the whole controversy and take sides with the Aberdeen school. As he developed an extraordinary genius for stratigraphy he not only broke to pieces the official work of the Geological Survey in the Highlands, but by revealing the true secret of the structure of that perplexing region, he played havoc with the Murchisons and the Geikies and all their satellites, convicting them of *bungling* and covering them with ridicule. . . .

Nature, in fact, in these parts had suffered from a much more powerful emetic than Murchison imagined, and when bits of the primitive crust of the GLOSE were thrown up and pushed on the top of more recent deposits, Murchison *jumped to the conclusion* that they were of later date than what they lay on. It was a *terrible blunder*, as the Aberdeen men persistently held, and we do not wonder that Sir Archibald Geikie, who rose to place and power by defending it, is anxious to have his connection with it *veiled* by a friendly hand. But it is rather outrageous for the friendly hand to give him the credit of conceding the very *error* which he *defended to the last gasp*, and deprive Professor Lapworth of the honour of having banished it from science. One of the most diverting things, however, in the Article in *Nature* is that Sir Archibald Geikie is belauded because, when frightened by the stir Professor Lapworth's paper made in 1883, he was fain to send his surveyors to go over the Highlands again—he, as their official chief, ordered them "to divest themselves of any *prepossession in favour of published views*, and to map out the actual facts." Old Colin Campbell, when he objected to the institution of the Victoria Cross, said it was as absurd to decorate a soldier for being brave as a woman for being virtuous. He did not foresee a still greater absurdity—that of eulogising a man of science because he instructed his assistants to tell the truth when conducting an investigation into his own blunders." (*Itaics ours*).—From the Daily Chronicle, Saturday, Jan. 14th, 1893.

And in a further issue the same paper says :

"Sir Archibald Geikie, Director-General of the Geological Survey, has at last taken notice—in *Nature*, we need hardly say—of our article condemning the attempt to give the Survey all the credit of some of the most remarkable discoveries of the age which have really been made by men unaided by the State, and toiling for daily bread as teachers of science. We had heard something that caused us to expose this scandal. The fact is the official ring of State-endowed science, not content with *jobbing* the Royal Society and its distinctions, as their critics have been showing in the *Times*, are meditating a raid on the taxpayer. They want more money, and as a preliminary step their official organ *Nature* of course begins to "boom" their work and reputations. This is a good old game. The only novelty in the situation is that a daily newspaper, for the first time in history, ventured to show it up. We do not desire to be harsh to the illustrious scientists who edit *Nature*. It is the duty of all official organs to make big men out of small material. But when they begin to do this by coolly confiscating the achievements of private and independent workers for one of the managing partners of the great firm of Huxley, Geikie, Dyer & Co., limited, we thought it time to protest. . . . The letters that have been appearing in the *Times* make some funny revelations about the way the Royal Society is "worked." Sir Archibald Geikie's defence suggests that if the *Times* only followed up the game it scented it would show its readers plenty of sport. We ourselves would make no objection to a vote of money in aid of researches into the "frank" and "practical" manner in which, *and the terms on which*, the official gang of science frequently "acknowledge" the achievements of young outsiders."—*Daily Chronicle*, Feb. 2, 1893.

Modern Astronomy has been set down as "the most exact of all the sciences," and geology said to be little less than infallible. The reader may form his own conclusions from the above extracts.

CIRCUMNAVIGATION

is said to be one of the best proofs that the earth is a globe.

It is often asserted—generally by those who have not the remotest idea of the subject—that ships have sailed round the world on one course, East or West, and come back to the place where they started from. It will be a surprise to such to be informed that this wonderful feat of navigation has never yet been accomplished; that it is most unlikely that it will ever become a fact; and that it would take several of the proverbial "small fortunes" to successfully carry it out.

Some people think it is quite an easy matter to start from, say Liverpool, and steer west and come back to the

starting point. Suppose we attempt such a journey. After crossing the Atlantic we must leave the ship and traverse the American continent. As there are no roads running due west, we should have to take the sun's bearing almost hourly to keep us on the true course; sometimes having to cross private property, travel through cultivated lands, and in some cases to go through other people's houses to preserve a westerly course. Suppose we arrived at the other side and then took ship across the Pacific, we should again have to travel across a continent—thousand of miles—to get back to the North Sea, and then across it and England we might arrive at Liverpool. If anyone thinks this possible he ought to try it.

If the reader will scan the surface of a school globe, he will at once see that if such a thing should ever be attempted, no reasonable hope of success could be entertained, unless the attempt were made in the extreme south. Suppose a ship to start from Cape Point, latitude 34 south, and steer east. The first land encountered would be Australia. She would then have to go south to clear the land and so could not return to her starting point on an easterly course, but would have to take many courses to return there.

Let the ship start from Cape Horn, in latitude 56 south, and steer west. She would soon encounter islands and would have to alter her course to north or south to clear them, and so could not get back to Cape Horn on a westerly course. The same would apply on an easterly course.

It is evident, therefore, that the earth can only be circumnavigated on one course in the extreme south. There, the dangers of icebergs, of magnitudes never met with in the north, and darkness during a great part of the year, would render such an expedition costly, dangerous, and of long duration.

Say a vessel starts on an easterly or westerly course in latitude 65 south. She could only sail during the very finest of summer weather, and would have to come north during the winter. Returning to her last point, she could again start on the course round the world, and continue so long as the fine weather lasted, repeating the process of going north during the dark and winter months. That this would occupy a long time, and cost a deal of money, is plain enough to anyone willing to be convinced. *For these reasons I am of opinion that no ship will ever sail round the world on one course and come back to her starting point.* And yet some the world a globe! One of the greatest feats of navigation will tell you that it has been done scores of times, and proves

and seamanship that man could undertake, and which has never yet been attempted, is spoken of as though it were a matter of almost daily occurrence! And who but the astronomers are responsible for such-like fallacies in school books and astronomical works? Who but those famed for "learned ignorance" are answerable for the foolish arrogance and stupid credulity of the masses on this subject? Can there be any truth in a science which is founded on conjecture and supported by so-called facts as proof of its correctness, which facts have never existed outside the brains of their inventors?

If it were said that a vessel could sail round the world, allowing for deviations for land, ice, and other obstacles in the way of her making one course; so that by making many and various courses she could at length return to her starting point, I would have no quarrel with the propounders of "circumnavigation." But if the general statements on the point were reduced and brought within the compass of fact, in language such as the above, the supposed proof of the world's rotundity would be annihilated. In Evers' "Navigation" it is stated that a vessel may leave a port, sail round the earth, and come back to her starting point *on one course*. This, I have no hesitation in stating, is *absolutely false*. If otherwise, I should be glad to be informed of the name of the port.

The learned are beginning to see through the fallacy of the circumnavigation proof of the world's rotundity, as the following from "Elementary Physiography," by Professor Richard A. Gregory, F.R.A.S., clearly shows :

"The earth has been circumnavigated a great many times, and it is a common occurrence for a ship to leave England, and by steering westward all the voyage to arrive in England again without retracing an inch of her way. Similarly, we can journey round the globe, sometimes travelling on land, and sometimes on the sea, but eventually returning to the starting point without at all turning back on our course. This would appear to be a certain proof that the earth's surface is curved, nevertheless it has been pointed out that circumnavigation would be possible if the earth had a flat surface, with the north magnetic pole at its centre. A compass needle would THEN *always point* to the centre of the surface, and so a ship might sail due east and west, as indicated by the compass, and eventually return to the same point by describing a circle."

D. Wilson-Barker, R.N.R., F.R.S.E., remarks, in his work on "Navigation" :

"The fact that the earth has been sailed round, is not sufficient proof as to its exact shape."

After these "authoritative" statements, we may hope that this so-called proof of the globular shape of the earth will soon be expunged from the text books.

CURVATURE.

In "Chambers' Mathematical Tables" the curvature of the globe is given as 7.935 inches to the mile, varying inversely as the square of the distance. If it be required to ascertain the curvature on a globe of 25,000 statute miles equatorial circumference, square the distance and multiply by 7.935 inches. The result is the curvature. Thus, in six miles there is a dip of nearly 24 feet; in 30 miles, nearly 600 feet; and so on.

In "Mensuration," by T. Baker, C.E., the correction for curvature is said to be 7.962 inches to the mile. These two equations so nearly agree, and amount to just about what the correction would be on a globe of the size the earth is said to be, that they may be taken as correct. If, therefore, the world we live on is a globe, it is a simple matter to find out how far any object at a given height can be seen.

In September, 1898, I received a letter from Australia, in which the writer says:

"In the year 1872 I was on board the ship "Thomas Wood," Capt. Gibson, from China to London. Owing to making a long passage, we ran short of provisions, and so short after rounding the Cape that the Captain spoke of putting into St. Helena for a supply. It was then my hobby to get the first glimpse of land, and in order to do this I would go up to the topgallant yard and make a survey, just as the sun would be rising. The island was clearly in view, well on the starboard bow. I reported this to Capt. Gibson. He disbelieved me, saying it was impossible, as we were 75 miles distant. He, however, offered me paper and pencil to sketch the land I saw. This I did. He then said, 'you are right,' and shaped his course accordingly. I had never seen the Island before, and could not have described the shape of it had I not seen it."

St. Helena is a high volcanic island, and if my informant had seen the top only, there would have to be an allowance made for the height of the land, but as he sketched *the island*, he must have seen the whole of it, which should have been 3,650 feet below the line of sight, if the world be a globe (deducting 100 feet for the height of the yard he viewed it from).

In "Chambers' Information for the People," section on Physical Geography, page 59, the following occurs :

"In North America, the basin or drainage of the Mississippi is estimated at 1,300,000 square miles, and that of the St. Lawrence at 600,000; while northward of the 50th parallel, extends an inhospitable *flat* of perhaps greater dimensions. . . . Next in order of importance is that section of Europe extending from the German Sea, through Prussia, Poland, and Russia, towards the Ural Mountains, presenting indifferently tracts of heath, sand and open pasture, and regarded by geographers as ONE VAST PLANE. So *flat* is the general profile of the region, that it has been remarked, IT IS POSSIBLE TO DRAW A LINE FROM LONDON TO MOSCOW, WHICH WOULD NOT PERCEPTIBLY VARY FROM A DEAD LEVEL."

The foregoing is a London-to-Moscow proof that the surface of the world is not globular. On a globe, no matter how powerful the glass, only a certain distance could be seen, as the roundness of the globe would prevent a glass from seeing round it, and its thickness would equally prevent one seeing through it. But in fine weather objects at distances out of all proportion to what the curvature would allow, are visible with the assistance of a good glass. The following from the "Voyage of a Naturalist," by C. Darwin, page 166, illustrates this point :

"The guanaco, or wild llama.—Mr. Stokes told me that he one day saw, through a glass, a herd of these animals which evidently had been frightened, and were running away at full speed, although *their distance was so great that he could not distinguish them with the naked eye.*"

From the "Atlas of Physical Geography," by the Rev. T. Milner, M.A., I extract the following :

"Vast areas exhibit a *perfectly dead level*, scarcely a rise existing through 1,500 miles from the Carpathians to the Urals. South of the Baltic *the country is so flat* that a prevailing north wind will drive the waters of the Stettiner Haf into the mouth of the Oder, and give the river a backward flow 30 or 40 miles."

"The plains of Venezuela and New Granada, in South America, chiefly on the left of the Orinoco, are termed llanos, or level fields. Often in the space of 270 square miles THE SURFACE DOES NOT VARY A SINGLE FOOT."

"The Amazon only falls 12 feet in the last 700 miles of its course; the La Plata has only a descent of one thirty-third of an inch a mile."

These extracts clearly prove that the surface of the earth is a level surface, and that, therefore, the world is not a globe. And when we come to consider the surface of the world *under the sea*, we shall find the same uniformity of evidence against

the popular view. In "Nature and Man," by Professor W. B. Carpenter, article "The Deep Sea and its Contents," pages 320 and 321, the writer says:

"Nothing seems to have struck the "Challenger" surveyors more than the extraordinary FLATNESS (except in the neighbourhood of land) of that depressed portion of the earth's crust which forms the FLOOR OF THE GREAT OCEANIC AREA. . . . If the bottom of mid-ocean were laid dry, an observer standing on any spot of it would find himself surrounded BY A PLAIN, only comparable to that of the North American prairies or the South American pampas. . . . The form of the depressed area which lodges the water of the deep ocean is rather, indeed, to be likened to that of a FLAT WAITER or TEA TRAY, surrounded by an elevated and deeply-sloping rim, than to that of the basin with which it is commonly compared."

This remarkable writer tells of thousands of miles, in the Atlantic, the Pacific, and the great Southern Ocean beds being a plane surface, and from his remarks it is clear that A FLAT SURFACE IS THE GENERAL CONTOUR OF THE BED OF THE GREAT OCEANS FOR TENS OF THOUSANDS OF SQUARE MILES.

CANALS.

If the earth be, the globe of popular belief, it is very evident that in cutting a canal, an allowance must be made for the curvature of the globe, which allowance would correspond to the square of the distance multiplied by eight inches, nearly. From the *Age*, of 5th August 1893, I extract the following:

"The German Emperor performed the ceremony of opening the Gates of the Baltic and North Sea Canal, in the spring of 1891. The canal starts at Holtenau, on the south side of Kiel Bay, and joins the Elbe 15 miles above its mouth. It is 61 miles long, 200 feet wide at the surface and 85 feet at bottom, the depth being 28 feet. No locks are required, as the surface of the two seas is level."

Let those who believe it is the practice for surveyors to make allowance for "curvature" ponder over the following from the Manchester Ship Canal Company.—(*Earth Review*, October, 1893).

"It is customary in Railway and Canal constructions for all levels to be referred to a datum which is nominally horizontal, and is so shown on all sections. It is not the practice in laying out Public Works to make allowance for the curvature of the earth."—Manchester Ship Canal Co., Engineer's Office, 19th February, 1892.

A surveyor, Mr. T. Westwood, writes to the *Earth Review*, for January, 1896, as follows :

"In levelling, I work from Ordnance marks, or canal levels, to get the height above sea level. . . . I work sometimes from what is known as the Wolverhampton level, this is said to be 473.19 feet above sea level; sometimes I work from the Birmingham level, this is said to be 453.04 feet above sea level. Sometimes I work from the Walsall level, this is said to be 407.89 feet above sea level. The puzzle to me used to be, that, though each extends several miles, each level was and is treated throughout its whole length as the same level from end to end; not the least allowance being made for curvature, although if the earth were a globe, 112 feet ought to be allowed. . . . One of the civil engineers in this district, after some amount of argument on each side as to the reason why no allowance for curvature was made, said he did not believe anybody would know the shape of the earth in this life."

I think most will grant that a practical man is capable of forming a judgment, in all cases of more value than the merely theoretical calculator. Here, then, we have the evidence of practical men to the effect that no allowance for curvature is made in cutting canals, a clear proof that we are not living on a huge ball, but on a surface, the general contour of which is level, as the datum line from which surveys are made IS ALWAYS A HORIZONTAL LINE.

DISAPPEARANCES OF SHIPS AT SEA.

J. W. Draper, in his "Conflict between Religion and Science," page 160, says :

"The circular visible horizon and its dip at sea, the gradual appearance and disappearance of ships in the offing, cannot fail to incline intelligent sailors to a belief in the globular form of the earth."

The "circular visible horizon" amounts to nothing, because if we take our stand in a large square of, say, 20 miles, the visible horizon will be circular, any point in the distance being the edge of the circle of vision. If we measure off a square of 100 miles or so, the vision will be bounded by a circle, the limit of sight. So the "circular visible horizon" may at once be dismissed. But "its dip at sea" is just what *has never been seen*. It is the very thing that requires to be *seen to establish the globular theory*; it is the very thing

that never has been seen. Wherever we look at sea, the water extends in one straight line, as far as the eye can reach. A flat surface is always seen, and ships are seen at distances altogether out of proportion to the allowance to be made for convexity, if the surface were a convex one.

When a ship or any other object recedes from the observer on a level surface the highest part is always seen last by reason of perspective. So that the masts and sails of a receding vessel on a flat surface should be seen long after the hull has become invisible to the naked eye. Besides this law of perspective, the hull of a vessel is generally of a dark colour, and often at a very short distance disappears to the naked eye, because it has lost its individuality in the mass of surrounding water, both hull and water being nearly of the same colour. It appears to have mingled with the water, and is thus lost to sight. The hull has no background whatever, but the masts and sails have a splendid background against the sky, and stand out to advantage, and are, for this reason also, seen long after the hull has vanished. But that the hull has not "gone down behind a hill of water"—that it is not because of the globular surface of the water that it is invisible—has been proved by the writer many times.

At Capetown, sometime ago, I made special experiments with a view to arrive at the truth of the matter. On one occasion I watched the schooner *Lilla*, of Capetown, sail away north, bound to Saldanha Bay. Instead of gradually going down the hill of water—the observer always being on the highest part—she appeared to ascend an inclined plane, until she reached the level of my eye—perhaps 100 feet above sea level—and then gradually diminished in size. Soon her hull disappeared—it was painted black—and her masts and sails became smaller and smaller every minute. I then applied a binocular to the eye, and saw her hull plainly enough. It remained in sight until the individuality of the vessel's parts were lost in the distance.

The iron barque *La Querida*, of Liverpool, sailed out of Table Bay bound to Australia. I watched her until the hull had completely disappeared; but on applying the glass saw it as clearly as possible, and this when the vessel was at least 10 miles away. So that the "hill of water" in both these instances was imaginary only.

In May, 1895, I was a passenger on board the U.S.S. *Goth*. In Algoa Bay I gave a brief lecture on the subject of this work, and had much discussion with some of the passengers; one affirming he could believe all I said, with the

exception of the way I accounted for the disappearance of ships at sea. I replied that we would likely see one of the ships, and then it could be tested. Next day I observed a vessel about ten miles away, but though the masts and sails were pretty clear, the hull was not to be seen. Applying the glass I saw the hull as plain as any other part of the ship. I called the gentleman with whom I had the previous day's conversation and showed him the vessel. I asked him to look at the ship for some time so as to be quite sure whether the hull was visible or not. After looking a minute or so he was quite certain that the hull could not be seen. I asked him why it was invisible. "Because," said he, "it is hidden behind a hill of water, the surface of the ocean being convex." I asked him if he believed my glass could see through a "hill of water," and gave him the astronomer's curvature for the distance—which he admitted to be 10 miles—as 10 by 10 by 8 inches = 66 feet, less 20 feet for height of eye and 10 feet for height of the other vessel's hull, = 36 feet the hull should have been below the water. He replied that the glass could not, of course, see through a hill of water, and applied it to his eye. Great was his astonishment on seeing the hull, but equally ready was his confession that the theory of the earth's rotundity founded on the disappearance of ships at sea was false.

On a steamer in March, 1897, when near St. Helena my attention was called to a large vessel, just before sunset. With the naked eye the masts and sails were visible enough, but nothing of the hull could be seen. On applying the glass, there appeared to be no difference, and I was for some time lost in wonder. But as the sun got lower in the heavens, I noticed that the vessel's hull was overshadowed by banks of black clouds low down on the water and thus could not be seen. The hull was enveloped in dense blackness and was lost to the eye. But as soon as the sun was low enough to counteract this effect, I saw the hull quite plain with the glass, when only the sails were visible to the naked eye.

Between Teneriffe and Southampton we sighted a large four-masted steamer astern of us. The hull was also plainly to be seen—the vessel appeared to be in ballast. Our ship's officers said she was 12 miles away, and I think the distance was not less. For two whole days she was visible to us astern; sometimes the hull being quite plain, at other times being invisible; thus proving that the state of the atmosphere has more to do with the matter than globularity, if it existed, could have. *According to the globe theory, an object plainly*

visible to the naked eye and seen by scores of people, should have been 96 feet below the horizon, allowing both vessels to be the same height above the water, which was as near as possible correct, as our ship had scarcely any cargo on board and presented a high side out of the water.

ANOTHER WITNESS.

“To the Editor of the *Earth Review*.

Sir,—In August last I, with several other friends, being in Oban for a holiday, took a trip for a day in a small yacht on Loch Lorne, and being a glorious sunshiny day and so calm that not a ripple was seen, and being becalmed for an hour about mid-day we observed a good many sights of various kinds. Amongst other things that we saw was a yacht, which the captain told us was 12 miles distant. We saw all the masts and part of the hull, and to get a better view of her we took our binocular opera glass (a good one). Now, sir, would'nt it require a funny curvature table either with or without the odd fractions to explain how we saw the hull of that vessel twelve miles off? According to a table furnished by the present Astronomer Royal recently, it ought to have been 66 feet below the line of sight; but the “table” that we saw it from was the side of our yacht, and we concluded the sea was level.

Yours respectfully,

Siddal, Halifax.

JOHN SMITH.

The following is from “100 Proofs that the Earth is not a Globe”:

“If we take a trip down the Chesapeake Bay, in the day-time, we may see for ourselves the utter fallacy of the idea that when a vessel appears “hull down,” as it is called, it is because the hull is “behind the water”: for, vessels have been seen, and may often be seen again, presenting the appearance spoken of, and away—far away—beyond those vessels, and, at the same moment, the level shore line, with its accompanying complement of tall trees, towering up, in perspective, over the heads of the ‘hull-down’ ships!”

The following is from *Chambers' Journal*, of February, 1895, page 32:

“A good many years ago a Pilot in the Mauritius reported that he had seen a vessel which turned out to be 200 miles off. This incident caused a good deal of discussion in nautical circles at the time, and strange to say, a seemingly well authenticated case of the same kind occurred afterwards at Aden. A Pilot there announced that he had seen from the heights the Bombay steamer then nearly due. He stated precisely the direction in which he saw her, and added that her head was not then turned towards the port. Two days afterwards the missing

steamer entered the Port, and it was found on enquiries that at the time mentioned by the Pilot she was exactly in the direction and position indicated by him, but ABOUT TWO HUNDRED MILES AWAY."

Under exceptional conditions of the atmosphere, therefore, enormous distances can be penetrated by the unaided eye, and with a good telescope, objects at distances totally out of proportion to the globular theory, can be seen. Take the case of the above steamer. If the globe theory be correct this vessel would have been FOUR MILES BELOW THE LINE OF SIGHT, *allowing one mile for height of observer*, and thus even when aided by the most powerful telescope ever invented, could not have been seen. Once more, it dawns on the thinking man, that the world is not the globe of popular credulity, but an extended motionless plane.

DISTANCES.

If the world be a globe, the distances which are sailed by ships "sailing round the globe" would answer to the theory, and measurements as made by such ships would always answer to the theoretical distances of the astronomer. That such is not the case, as I shall presently show, disproves the theory. First, let us enquire how distances are obtained, say in sailing on an easterly or westerly course. In obtaining the longitude by dead reckoning, an allowance for the supposed convergence (or shorter longitude) according to the latitude would have to be made, when the result obtained should not vary much from longitude obtained by observation. When currents have to be reckoned with, the allowance for their known velocity in any direction would bring the result of the dead reckoning up to that obtained by observation; always remembering that if a ship is steering east, for example, the allowance FOR THE DIRECTION of the current cannot be the same as would have to be made by a vessel in the same latitudes steering west. *If the allowance for currents be made in the same direction when the ship is steering west as when she is steering east, IT IS VERY EVIDENT THAT THIS IS DONE TO BRING THE THEORETICAL RESULT INTO LINE WITH THE ACTUAL FACTS.* Navigators are often at a loss to account for the great differences between dead reckoning (even when

the allowance for currents has been made) and the ship's position as obtained by observation. Believing that they are sailing on a globular surface, nothing presents itself to the mind, but the usual *theories* by which they unsuccessfully endeavour to account for the discrepancy. Did they know that the surface of the ocean is a plane surface (*they OUGHT TO KNOW THIS*), something new would present itself for consideration, theories would be abandoned, and investigation instituted. The result could not fail to be advantageous to navigation generally. In "South Sea Voyages," by Sir James C. Ross, Vol. 1, page 96 states:

"We found ourselves every day from 12 to 18 miles by observation *in advance* of our reckoning."

Page 27 :

"By our observations at noon we found ourselves 58 miles to the *eastward* of our reckoning in two days."

"Voyage towards the South Pole," by Captain Jas. Weddell, states:

"Feb. 11th, at noon, in lat. $65^{\circ} 53'$ South, our chronometers gave 44 miles more *Westing* than the log in three days."

Lieutenant Wilkes says that in less than 18 hours he was 20 miles to the *east* of his reckoning, in latitude $54^{\circ} 20'$ South. In "Anson's Voyage round the World," by R. Walter, page 76, the following statement is made:

"It was, indeed, most wonderful that the currents should have driven us to the eastward with such strength; for the whole squadron esteemed themselves upwards of 10 degrees more westerly than this land (Straits of Magellan); so that in running down, by our account, about 19 degrees of longitude, we had not really advanced half that distance."

Captain Woodside, of the American barquentine *Echo*, at Capetown, on 26th June, 1898, reports that on 12th January, 1896, being without observation for two days and going 250 miles a day on a straight course, he expected to be 100 miles south and a long way to the eastward of Gough Island in latitude 40° south, but was startled to find his ship making straight for the island, and barely escaped shipwreck. The *Philena Winslow* was wrecked there 25 years ago, and there are remains of numerous other wrecks.

The fact that in sailing either east or west the currents are allowed *the same way*, proves that the rotundity idea is the factor which effectually debars our navigators from obtaining a correct solution of the difficulty. Let it be

acknowledged that, as the surface of all standing water is level, the world is a plane and not a globe, and investigation may be instituted into the causes of the discrepancies to which we have alluded. But so long as the globular idea prevails, so long will it be impossible for the navigator to arrive at the truth of the matter. I have further weight of evidence on this important branch of our subject, by comparing the theoretical measurements of the supposed "globe" with the distances actually made in sailing. These data, which I now submit, prove clearly to any unprejudiced mind, that the world cannot be the globe of astronomical imagination; but that it is an outstretched circular plane, without axial or orbital motion.

Sir Robert Ball, in his "Story of the Heavens," page 163, informs the reader that:

"The dimensions of the earth are known with a high degree of accuracy."

This writer is recognised as an able exponent of globular hypotheses, and it is generally conceded that what he says may be regarded as correct. Let us now enquire with what high degree of accuracy the dimensions of the earth are known. If the earth be the globe it is generally said to be, it is evident that the further we go south from the equator, the smaller will the circles be, and no circle south of the equator could be equal to that at the equator.

The S.S. *Nithsdale*, of Glasgow, Captain Hadden, sailed from Hamelin Bay, in Western Australia, on 8th January, 1898, arriving at Port Natal on 1st February, 1898, having steamed 4,519 nautical miles. Her log, of which the chief officer, Mr. Boyle (also a passed Master), kindly gave me a copy, shows that she did not make quite a rhomb line track.

Hamelin Bay is in latitude 34° south and longitude $115^{\circ} 5'$ east, Port Natal is situate in latitude $29^{\circ} 53'$ south and $31^{\circ} 4'$ east longitude. The difference of latitude being so small, we shall not get far out if we take the middle latitude, viz.: 32° south. The difference of longitude is $84^{\circ} 1'$ or 4.28 of the complete circle of 360° round the world. Something must be added to the ship's log so as to bring the distance up to the rhomb line track, say 100 miles; therefore, to find the distance round the world at 32° south it is only necessary to solve the following problem:

As $84^{\circ} 1' : 360^{\circ} :: 4,619$ nautical or 5,390 statute miles.
: X. Answer = 23,000 miles, nearly.

This is several thousand miles in excess of what the distance would or could be on a globe. And further south on a globe, the distance would be less.

In the "Cruise of H.M.S. *Challenger*," by W. J. J. Spry, the distance made good from the Cape of Good Hope to Melbourne is stated to be 7,637 miles. The Cape is in latitude $34^{\circ} 21'$ south and Melbourne in latitude 37° south, the longitude of the Cape being $18^{\circ} 30'$ east and Melbourne 145° east. The middle latitude is $35\frac{1}{2}^{\circ}$. Difference of longitude $126\frac{1}{2}^{\circ}$, which makes the distance round the world at that latitude ($35\frac{1}{2}^{\circ}$) to be over 25,000 statute miles and as great as the equator is said to be. Thus we see on reliable evidence that the further we go south the greater is the distance round the world. This latter distance is many thousand miles more than the purely theoretical measurement of the world at that latitude south. From the same work, we find the distance from Sydney to Wellington to be 1,432 miles. The middle latitude is $37\frac{1}{4}^{\circ}$, and the difference of longitude $23^{\circ} 36'$, which gives as the distance round the world at latitude $37\frac{1}{4}^{\circ}$ south, 25,500 statute miles! This distance is again greater than the greatest distance round the "globe" is said to be and many thousands of miles greater than could be the case on a globe. Thus, on purely practical data, apart from any theory, the world is proved to *diverge* as the south is approached and not to *converge*, as it would do on a globe.

FLUIDS.

It is in the nature of fluids to be and remain level, and when that level is disturbed by any influence whatever, motion ensues until the level is resumed.

Professor Airy tells us, in his "Six Lectures on Astronomy," that "quick-silver is perfectly fluid, its surface is perfectly horizontal." We may add that all fluids are the same, for the reason given by the next writer.

Mr. W. T. Lynn, of the Royal Observatory, Greenwich, in his "First Principles of Natural Philosophy," says: "the upper surface of a fluid at rest is a horizontal plane. Because if a part of the surface were higher than the rest, those parts of the fluid which were under it would exert a greater pressure upon the surrounding parts than they receive from

them, so that motion would take place amongst the particles and continue until there were none at a higher level than the rest, that is, until the upper surface of the whole mass of fluid became a horizontal plane."

The *English Mechanic* of 26th June, 1896, says:

"Since any given body of water must have a level surface, *i.e.*, no one part higher than another, and seeing that all our oceans (a few inland seas excepted) are connected together, it follows that they are all VIRTUALLY OF THE SAME LEVEL."

In March, 1870, the Bedford Canal was chosen to experiment upon with a view of determining whether water was horizontal or convex.

The following argument is taken from the report as printed in the *Field* for 26th March, 1870, and is considered to be *sufficient* and *unanswerable* :—

"The stations appeared, to all intents and purposes, equidistant in the field of view, and also in a regular series; first, the distant bridge; secondly, the central signal; and, thirdly, the horizontal cross-hair marking the point of observation; showing that the central disc 13 ft. 4 in. high does NOT depart from a straight line taken from end to end of the six miles in any way whatever, either laterally or vertically. For, if so, and (as in the case of the disc 9 ft. 4 in. high) if it were lower or nearer the water, it would appear, as that disc does, nearer to the distant bridge. If it were higher, it would appear in the opposite direction nearer the horizontal cross-hair which marks the point of observation. As the disc 4 ft. lower appears near to the distant bridge, so a disc to be really 5 ft. higher would have to appear still nearer to the horizontal cross-hair of the telescope. And therefore it is shown that a straight line from one point to the other passes through the central point in its course, and that a curved surface of water has NOT been demonstrated."

In "Theoretical Astronomy," page 47, it is stated:

"On the Royal Observatory wall at Greenwich is a brass plate, which states that a certain horizontal mark is 154 feet above mean water at Greenwich and 155.7 feet above mean water at Liverpool."

The difference of the level between Liverpool and Greenwich is thus shewn to be only 1.7 feet. If the world were a globe, the difference of level would be many thousands of feet. It is a common saying that water will find its level, and it is true. If water be dammed back, it will, as soon as released, take the easiest course to where it can find its level. The following from the *Natal Mercury* of 24th October, 1898, fully illustrates this point;

A MOUNTAIN OF WATER.

London, Oct. 19 (*Diggers' News Special*).—The steamer *Blanche Rock*, whilst entering the Morpeth Dock, Birkenhead, burst the dock gates. The water inside, which was 8 ft. higher than the level of the river, rushed out with tremendous force. The swirling mass of water damaged the shipping, and beached and sank a number of barges. Two lives were lost.

As soon as the water got to the level of the river, its power would cease.

C. Darwin, in his "Voyage of a Naturalist," page 328, tells us:

"I was reminded of the Pampas of Buenos Ayres, by seeing the disc of the rising sun, *intersected by an horizon* LEVEL AS THAT OF THE OCEAN."

A globe with level oceans would be a new thing in geography!

FIGURE OF THE EARTH.

In the "History of the Conflict between Religion and Science," by J. W. Draper, page 153, we are informed that

"An uncritical observation of the aspect of nature persuades us that the earth is an extended level surface which sustains the dome of the sky, a firmament dividing the waters above from the waters beneath; that the heavenly bodies—the sun, the moon, the stars—pursue their way, moving from east to west, their insignificant size and motion round the motionless earth proclaiming their inferiority. Of the various organic forms surrounding man none rival him in dignity, and hence he seems justified in concluding that everything has been created for his use—the sun for the purpose of giving him light by day, the moon and stars by night."

A critical observation of Nature, I may say, persuades an intelligent and unbiassed mind that "seeing is believing," and that, therefore, the world is not the globe of modern ideas. Dr. Draper further tells us, on page 156 of his book:

"Many ages previously a speculation had been brought from India to Europe by Pythagoras. It presented the sun as the centre of the system. Around him the planets revolved in circular orbits, their order of position being Mercury, Venus, Earth, Mars, Jupiter, Saturn, each of them being supposed to rotate on its axis, as it revolved round the sun."

"Aristarchus adopted the Pythagorean system as representing the actual facts. This was the result of a recognition of the sun's amazing distance, and *therefore* of his enormous size. The heliocentric system, thus regarding the sun as the central orb, degraded the earth to a very subordinate rank, making her only one of a company of six revolving bodies."

This *speculation* (apt word this) has been shown in the foregoing pages to be without the slightest foundation in fact, and the world shown to be a plane and not a globe.

In "Modern Science and Modern Thought," by S. Laing, the following imaginative proof of the globular figure of the earth is brought forward :

"If, for instance, by travelling 65 miles from North to South, we lower the apparent height of the Pole Star one degree, **IT IS MATHEMATICALLY CERTAIN** that we have travelled this 65 miles, not along a flat surface, but along a circle which is three hundred and sixty times 65, or, in round numbers, 24,000 miles in circumference, and 8,000 miles in diameter and that the form of the earth is a perfect sphere of these dimensions."

And on pages 162 and 163 the following is the continuation of the same ridiculous argument :

"Until the Cape was doubled, the course of De Gama's ships was in a general manner southward. Very soon it was noticed that the elevation of the Pole Star above the horizon was diminishing, and soon after the equator was reached the star had ceased to be visible. Meantime other stars, some of them forming magnificent constellations, had come into view—the stars of the Southern hemisphere. **ALL THIS WAS IN CONFORMITY TO THEORETICAL EXPECTATION FOUNDED ON THE ADMISSION OF THE GLOBULAR FORM OF THE EARTH.**"

If we select a flat street a mile long, containing a row of lamps, it will be noticed that from where we stand the lamps gradually decline to the ground, the last one being apparently quite on the ground. Take the lamp at the end of the street and walk away from it a hundred yards, and it will appear to be much nearer the ground than when we were close to it; keep on walking away from it and it will appear to be gradually depressed until it is last seen on the ground and then disappears. Now, according to the astronomers, the whole mile was only depressed about eight inches from one end to the other, so that this 8 in. could not account for the enormous depression of the light as we recede from it. This proves that the depression of the Pole Star can and does take place in relation to a flat surface, simply because we increase our distance from it, the same as

from the street lamp. In other words, the further away we get from any object above us, as a star for example, the more it is depressed, and if we go far enough it will sink (or appear to sink) to the horizon and then disappear. The writer has tried the street lamp many times with the same result.

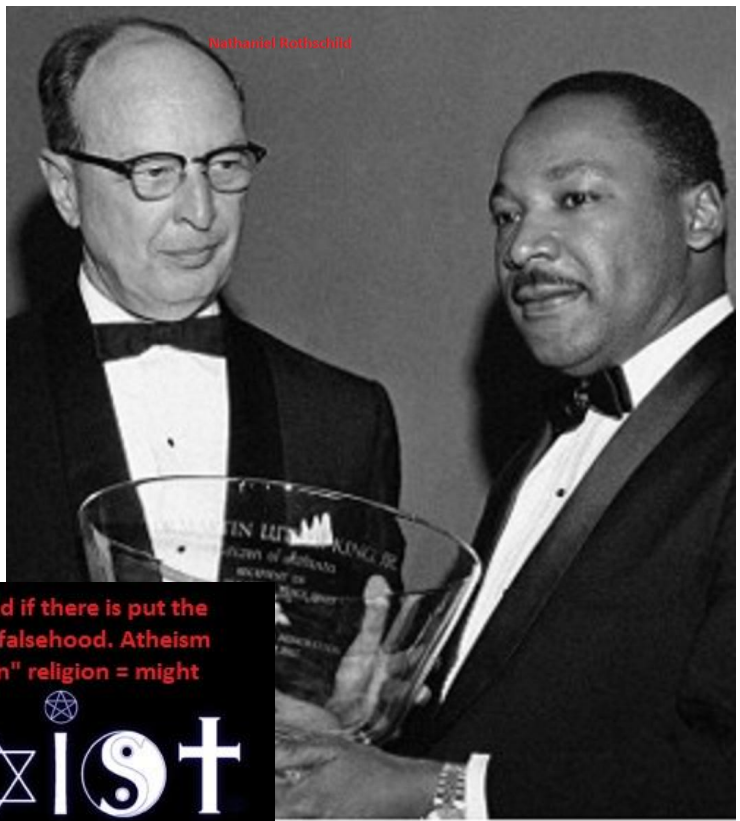
GROWTH OF THE EARTH.

R. A. Proctor, in his work "Our place among Infinities," pages 9 and 10, tells us that the earth was once a mass of glowing vapour,

"capturing then as now, but far more actively than now, masses of matter which approached near enough, and GROWING by these continual indraughts from without all that is within and upon the earth are formed of materials which have been drawn in from these depths of space surrounding us on all sides particles drawn in towards the earth by processes *continuing millions and millions of ages.*"

This is written with as much authority as the writer could have had, had he been present when the supposed "spark" was "shot off from the sun." He writes as though he had carefully watched the spark grow bigger, age by age, until it assumed the proportions it had when it "began to cool down." He tells his story as though he had been an eye-witness of all the supposed processes during all the supposed "countless ages" until protoplasm made its appearance and life began to evolve upon the supposed globe. The reader is made to understand, from the "scientific" manner in which the mythical story-teller unfolds his mythical tale, that he, the retailer of the story, carefully watched the evolution of the earth until the time came when the astronomers were able to tell us "without the fear of contradiction" that the earth actually had taken all these millions of ages to evolve into its present form and size. Marvellous, is it not, and how very scientific, to be sure? The reader may pass over the whole of the foregoing extract from the pen of "the greatest astronomer of the age," for there is not one word of truth in it. It is the product of a fertile imagination, nothing more.

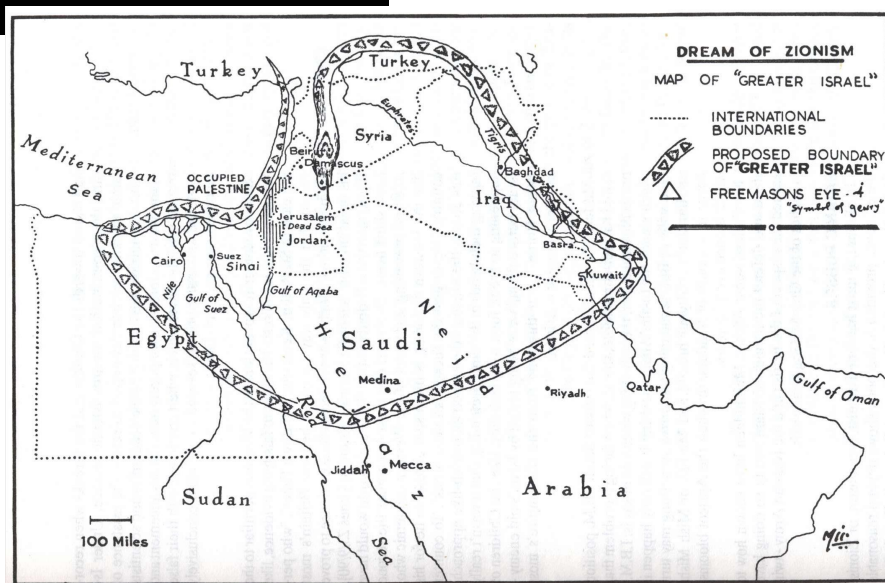
The world is much the same as it was in the days of our grandfathers, only the people now are more infidel than they were in those days. And since its creation



There is no objective truth and if there is put the objective truth on a par with falsehood. Atheism pushed. Eventually "evolution" religion = might =right.

♂

☾ ☰ ☯ ☪ ☩



it has not greatly altered, except as it has been altered by the universal flood in the time of that righteous man Noah. The flood disturbed the "strata" of the earth and broke up its layers, hence we find the bones of men and animals beneath the "crust," which fact causes infidel scientists, who are seeking a proof of the untruth of the Bible, to believe that the earth is many millions of ages old, and therefore not the earth of the creation as recorded in Genesis. The poet Cowper has well said

"Hear the just law, the judgment of the skies,
He that hates TRUTH shall be the dupe of lies;
And he that WILL be cheated to the last,
Delusions, strong as hell, shall bind him fast."

GRAVITATION.

The "law of gravitation" is said by the advocates of the Newtonian system of astronomy, to be the greatest discovery of science, and the foundation of the whole of modern astronomy. If, therefore, it can be shown that gravitation is a pure assumption, and an imagination of the mind only, that it has no existence outside of the brains of its expounders and advocates, the whole of the hypotheses of this modern so-called science fall to the ground as flat as the surface of the ocean, and this "most exact of all the sciences," this wonderful "feat of the intellect" becomes at once the most ridiculous superstition and the most gigantic imposture to which ignorance and credulity could ever be exposed.

In the "Story of the Heavens," by Sir R. Ball, it is stated on page 82

"The law of gravitation, THE GREATEST DISCOVERY that science has yet witnessed."

"The law of gravitation WHICH UNDERLIES THE WHOLE OF ASTRONOMY."

Page 101

"The law of gravitation announces that every body in the universe attracts every other body with a force which varies inversely with the square of the distance."

"Popular Science Recreations," by G. Tissandier, pages 486 and 487, contains the following:

"Gravitation is the force which keeps the planets in their orbits."

"Every object in the world tends to attract every other object in proportion to the quantity of matter of which each consists."

Professor W. B. Carpenter, in his work "Nature and Man," page 363, says :

" 'The laws of light and gravitation,' wrote Mr. Atkinson to Harriet Martineau, 30 years ago, 'extend over the universe, and explain whole classes of phenomena,' and this explanation, according to the same writer, is all-sufficient, '*Philosophy finding no God in nature, NOR SEEING THE WANT OF ANY.*' "

C. Vernon Boys, F.R.S., A.R.S.M., M.R.I., in his paper, "The Newtonian Constant of Gravitation," says :

"G, represents that mighty principle under the influence of which every star, planet and satellite in the universe pursues its allotted course. Unlike any other known physical influence, it is independent of medium, it knows no refraction, it cannot cast a shadow. It is a mysterious power which NO MAN CAN EXPLAIN, OF ITS PROPAGATION THROUGH SPACE, ALL MEN ARE IGNORANT. . . . I cannot contemplate this mystery, at which we ignorantly wonder, without thinking of the altar on Mars' hill. When will a St. Paul arise able to declare it unto us? Or is gravitation, like life, a mystery that can never be solved?"—*Proceedings of the Royal Institution of Great Britain, March 1895, p. 355.*

Professor W. B. Carpenter, in his paper "Nature and Law," published in the "Modern Review" for October, 1890, says :

"The first of the great achievements of Newton in relation to our present subject, was a piece of purely Geometrical reasoning. ASSUMING two forces to act on a body, of which one should be capable of imparting to it uniform motion in a straight line, whilst the other should attract it towards a fixed point in accordance with Galileo's law of gravity, he demonstrated that the path of the body would be deflected into a curve The idea of continuous onward motion in a straight line, as the result of an original impulsive force not antagonised or affected by any other—formularised by Newton as his first 'law of motion'—is not borne out by any acquired experience, and does not seem likely to be ever thus verified. For in no experiment we have it in our power to make, can we entirely eliminate the antagonising effects of friction and atmospheric resistance; and thus all movement that is subject to this retardation, and is not sustained by any fresh action of the impelling force, must come to an end. Hence the conviction commonly entertained that Newton's first 'law' of motion must be true, cannot be philosophically admitted to be anything more than a probability. . . . WE HAVE NO PROOF, AND IN THE NATURE OF THINGS CAN NEVER GET ONE, OF THE ASSUMPTION OF THE ATTRACTIVE FORCE EXERTED BY THE EARTH, OR BY ANY OF THE BODIES OF THE SOLAR SYSTEM, UPON OTHER BODIES AT A DISTANCE. Newton himself strongly felt that the impossibility of *rationaly accounting for action at a distance through an intervening vacuum,*

was the weak point of HIS system. All that we can be said to know is that which we learn from our own experience. Now, in regard to the Sun's attraction for the Earth and Planets, WE HAVE NO CERTAIN EXPERIENCE AT ALL. Unless we could be transported to his surface, we have no means of experimentally comparing Solar gravity with Terrestrial gravity; and if we *could* ascertain this, we should be no nearer the determination of his attraction for bodies at a distance. THE DOCTRINE OF UNIVERSAL GRAVITATION THEN, IS A PURE ASSUMPTION."

In "Letters to the British Association," Professor Bernstein says:

"The theory that motions are produced through material attraction is absurd. . . . Attributing such a power to mere matter, which is PASSIVE BY NATURE, is a supreme illusion. . . . it is a lovely and easy theory to satisfy any man's mind, but when the *practical test* comes, it falls all to pieces and becomes one of the most ridiculous theories to common sense and judgment."

The following extracts are taken from "A Million of Facts," by Sir Richard Phillips:

"If the sun has any power, it must be derived from motion; and if acting on bodies at a distance, like Jupiter on his moons, or the Earth on its moon, THERE *MUST BE AN INTERVENING MEDIUM TO CONDUCT ITS MOMENTUM THROUGH ITS SYSTEM.*"

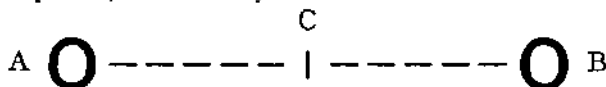
"It is a principle never to be lost sight of, that circular motion is a necessary result of equal action and reaction in contrary directions; for the harmony would be disturbed by variation of distance, if the motion were rectilinear. The same action and reaction are therefore only to be preserved by reciprocal circular motion. NO ATTRACTION AND NO PROJECTILE FORCE ARE THEREFORE NECESSARY. THEIR *invention must be regarded AS BLUNDERS OF A SUPERSTITIOUS AGE.*"

"If the bodies came near while moving THE SAME WAY, there would be no mutual REACTION, and they would go together for want of reaction, and NOT OWING TO THAT MECHANICAL IMPOSSIBILITY CALLED ATTRACTION."

"To accommodate THE HYPOTHETICAL LAW OF UNIVERSAL GRAVITATION to the phenomena of the Planets, astronomers have preferred to change the mean density of matter itself; and the Earth, for comparison, being taken at a density of 1,000, to accommodate Mercury to THE ASSUMED LAW, it is taken as 2,585; Venus, 1,024; Mars, 656; Jupiter, 201; Saturn, 103; and Herschel, 218. Consequently, we have the *paradox*, that Jupiter, 1,290 times larger than the Earth, contains but 323 times more atoms. Saturn 1,107 times larger, but 114 times more atoms. Even the Sun, according to these

theorists, is but one-fourth the density of the Earth! There may be differences, but chemistry and all the laws that unite and compound atoms, are utterly at *variance* with so rash and wild an *hypothesis*."

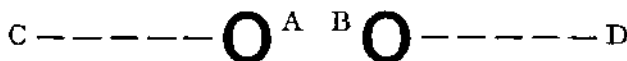
"It is waste of time to break a butterfly on a wheel, but as astronomy and all science is beset with *fancies* about attraction and repulsion, it is necessary to *eradicate* them.



"If there are two bodies, and it is required to move A to C, the force moving A to C *must* proceed from the side A. Either some impact, or some involvement of a motion towards C, *must* act at A to carry A to C. The modern schools, however, assert that B may move A to C, and A move B to C; and this is *mutual attraction*!! Hence it is necessary to believe that B acts on the side A, where B is *not present*; and that A acts on B on the side B, where A is not present. In other words, A is required to be where it is not, and also be in force at A, so as to move B to C! all of which is absurd."

"If in any case A and B approach, it is not because A moves B towards itself, or B moves A towards itself, but owing to some causes which affect the space in which A and B are situated; and which causes act on A at A, and on B at B . . . the statement that A moves B, and B moves A, is ignorance, and is what is meant by attraction. It is also worse than ignorance to justify idleness by asserting that the true cause is indifferent; or to justify ignorance, by asserting that it is unknowable!!"

"This reasoning applies to every species of Attraction, whatever may be the pomposity of equivocal terms in which it is described. Universally, bodies cannot push other bodies towards themselves."



"If A and B are said to repel one another, and that B makes A move to C, and A makes B move to D, we have to bear in mind, that while A is moving to C it is in force *only in that direction*, and *cannot*, therefore, be moving B towards D. In like manner, while B is moving to D, it is in force *only in that direction*, and *cannot*, therefore, be in force in the contrary direction so as to move A to C." Every species and variety of Attraction and Repulsion are therefore absurd.

"MATTER IS IN ALL CASES THE CONDUCTOR OF MOTION. If a body moves, it is because it is the patient of some sufficient momentum of body or matter acting ON the side FROM which the body moves, and only in force in *that direction*."

"Some adopters of attraction, &c., talk, by false analogy, of *drawing*, others of *pulling*, *lifting*, &c. La Place INVENTS gravitating atoms, and gives them a velocity of 6,000 times that of light, which in some way (known only to himself) performs the work of bringing the body in; others IMAGINE little hooks! As to drawing, pulling, &c., it behoves them to show the tackle—the levers, the ropes, &c."

"In spite of all the learning, ingenuity, and elaborations of men, confessedly very able, if there is not and cannot be any action of the nature of attraction, and if the phenomena ascribed to it are local effects of palpable local causes, and if all the phenomena and involvement may be clearly explained on different principles, then it may be to be lamented that so much ability and character should have been wasted, while a respect for truth and sound reasoning demands that the whole should be FORGOTTEN AS A DREAM, OR DEMOLISHED AS A CARD HOUSE."

Professor Airy, in his "Lectures on Astronomy," 5th Edition, page 194, informs us

"Newton was the first person who made a calculation of the figure of the earth on the theory of gravitation. He took the following SUPPOSITION as the *only* one to which his theory could be applied. He ASSUMED the earth to be a fluid. This fluid matter he ASSUMED to be equally dense in every part. . . . For trial of his theory he SUPPOSED the ASSUMED fluid earth to be a spheroid. In *this manner* he INFERRED that the form of the earth would be a spheroid, in which the length of the shorter is to the longer, or equatorial diameter, in the proportion of 229 to 230."

The "New Principia," by N. Crossland, contains the following:

"In ascending a hill we experience a hard struggle, and feel more fatigued than when walking on level ground. Why is this? The Newtonian attributes this to the attraction of gravitation of the earth, against the *pull* of which we have to contend; but if he would be consistent with his theory that the attraction of gravitation *diminishes* inversely as the square of the distance from the centre of the earth, we ought, in defiance of experience, to feel it to be less laborious to ascend a hill than to promenade the same distance on level ground, because as we ascend we *recede* from the centre of the earth; therefore the force of gravitation ought to diminish in a corresponding degree. The Newtonian can only get over this difficulty by a species of scientific quibbling. According to the definition of weight I have given, the solution of the problem is perfectly simple. In ascending a hill a man comes in conflict with the law that the natural tendency of any body is to seek the easiest and shortest route to its level of stability. He chooses the very reverse, and must therefore endure the consequences of acting in opposition to this law. At every step he has to lift his *own weight*, and the higher he mounts the more he feels the influence of the law which he defies. His easiest and more direct course to obey the law of weight is to remain where he is; the next is to descend to a lower level.

"The attraction of gravitation is said to be stronger at the surface of the earth than at a distance from it. Is it so? If I spring upwards perpendicularly I cannot with all my might ascend more than four feet from the ground; but if I jump in a curve with a low trajectory, keeping my highest elevation about

three feet, I might clear at a bound a space above the earth of about eighteen feet; so that *practically* I can overcome the so-called force (pull) at the distance of four feet, in the proportion of 18 to 4, being the *very reverse* of what I ought to be able to do according to the Newtonian hypothesis.

"Again, take the case of a shot propelled from a cannon. By the force of the explosion and the influence of the reputed action of gravitation, the shot forms a parabolic curve, and finally falls to the earth. Here we may ask, why—if the forces are the same, viz., direct impulse and gravitation—does not the shot form an orbit like that of a planet, and revolve round the earth? The Newtonian may reply, because the impulse which propelled the shot is *temporary*; and the impulse which propelled the planet is *permanent*. Precisely so: but *why* is the impulse *permanent* in the case of the planet revolving round the sun? What is the *cause* of this permanence?

"We are asked by the Newtonian to believe that the action of gravitation, which we can easily overcome by the slightest exercise of volition in raising a hand or a foot, is so overwhelmingly violent when we lose our balance and fall a distance of a few feet, that this force, which is imperceptible under usual conditions, may, under extraordinary circumstances, cause the fracture of every limb we possess? Common-sense must reject this interpretation. Gravitation does not furnish a satisfactory explanation of the phenomena here described, whereas the definition of weight already given does, for a body seeking in the readiest manner its level of stability would produce precisely the results experienced. If the influence which kept us securely attached to this earth were identical with that which is powerful enough to disturb a distant planet in its orbit, we should be more immediately conscious of its masterful presence and potency; whereas this influence is so impotent in the very spot where it is *supposed* to be most dominant that we find an insurmountable difficulty in accepting the idea of its existence. Fortunately for our faculty of locomotion, the Newtonian hypothesis may be rejected as a snare and a delusion.

"It is quite amusing to watch Newtonians and Darwinians floundering about in their attempts to expound the mysteries of creation. Their theories are as ridiculous as the fashion which once prevailed for Della-Cruscan poetry, and they ought to be treated with equal severity.

"It seems quite possible that during the last two hundred years we have been living in a sort of scientific fool's paradise, and that universal gravitation is a gigantic Newtonian mare's nest.

"As a theoretical scientific guide we must give up Sir Isaac Newton as useless and misleading, and allow his reputation to retire into private life.

"In *Knowledge* of the 17th and 24th Feb., 1882, there appeared a discourse on *The Birth of the Moon by Tidal Evolution*, by Dr. Ball, the Astronomer Royal for Ireland, which I should say is *without exception*, the most delusive and absurd contribution ever made to so-called science. At one time I thought that "Parallax," who told us that the earth was a flat plane like a plate, was the most misguided man in the kingdom, but I now

believe that he is quite entitled to take rank in scientific wisdom, and to sit down on an equality with the Astronomer Royal of Dublin."

I have quoted at length on this important matter, and the evidence here produced, besides very much more in the same direction, for which I have not the space here, shows clearly that THERE IS NO SUCH FORCE AS GRAVITATION IN EXISTENCE ANYWHERE.

One of the world's so-called *great thinkers*, J. S. Mill, is quoted in Professor Carpenter's "Nature and Man," page 385, as saying:

"Although we speak of a man's fall as caused by the slipping of his foot, or the breaking of a rung (as the case may be) *the efficient cause* IS THE ATTRACTIVE FORCE OF THE EARTH, which the loss of support to the man's foot brings into operation."

If a man is not "deeper" than to believe what this "deep" thinker has left on record in this matter; if he has no more brain power than to accept the foregoing statement, I would strongly advise him to cease thinking altogether, and thus save the few brains he has. It is simply astounding that men, who in business matters are sharp enough, are as dull as bricks and as credulous as children when the awe-inspiring subject of gravitation, "that grand masterpiece of astronomy," is the theme. To ask the reason why, or to venture to suggest that the assumptions of the "learned" require some sort of proof to back them up, never seems to strike moderns who believe in this monstrous humbug. A. Giberne, in "Sun, Moon, and Stars," page 27, says:

"If the sun is pulling with such power at the earth and all her sister planets, why do they not fall down upon him?"

A very proper question, truly. And when this question is propounded to astronomers, they cannot give an answer worth recording. They simply do not know how to answer the question without stultifying their common-sense. But the above writer thinks it can be answered, so says:

"Did you ever tie a ball to a string and swing it rapidly round and round your head? If you did, YOU MUST HAVE NOTICED THE STEADY OUTWARD PULL OF THE BALL."

The "steady outward pull of the ball" clearly implies that the ball has *intelligence*, and knows just what to do so as to prevent its hitting the head of the operator. The

"outward pull" of a ball which is fastened to the hand of the operator by a string, is clearly impossible. If the operator ceased to impel it round and round his head by the mechanical attachment and the power he exerts in swinging it round, the ball would seek its level of stability and fall to the ground. And, as this illustration is used to teach what gravitation is, and how it acts, we shall just follow the illustration to its logical issue, and see where the theory is. The illustration implies that BETWEEN ALL THE BODIES IN THE UNIVERSE, THERE IS A CONNECTING LINK, which keeps the "body" that attracts attached to the "body" that is attracted. This connecting link, in the case of the ball, is the string. Now, we could readily understand gravitation if this illustration conveyed to us by the ball and the string were a correct representation of fact. But, we very naturally ask, what is the connecting link? Of what does it consist? And of what do all the connecting links between the sun and the myriad orbs of heaven consist? Would not the "strings" get somewhat entangled? Has this connecting link ever been observed anywhere? The answer to these pertinent questions is that THERE IS NO CONNECTING LINK in existence. When the "missing link" is produced, we are prepared to admit all the gravitation theorists teach on the subject. Until then we shall continue to regard it as the myth it undoubtedly is. But we are not done with the illustration yet. The "ball and string" device sets forth that the "body" that attracts is not only connected with the "body" attracted, but that the former IS THE MOTIVE POWER OF THE LATTER—that the sun is the power which compels the earth to revolve round it, even as the motive power of the ball is the exertion of the hand of the operator. Without the connecting link the earth would fall (according to the astronomers) in a rectilinear path for ever. But what these wise men do not see, and which is a necessary part of the theory, as represented by the ball and string idea, is that the motive power also must come from the sun. Without this motive power and the connecting link, the whole of the theory falls to pieces. THERE IS NO MOTIVE POWER IN THE SUN TO CAUSE THE EARTH TO REVOLVE AROUND IT, AND THERE IS NO CONNECTING LINK BETWEEN THE SUN AND THE EARTH TO KEEP THE LATTER IN ITS POSITION, *consequently the theory of universal gravitation has no existence in fact.* "He who cannot reason is a fool; he who *will not* reason is a bigot; he who *dares not*

reason is a coward ; but he who *can* and *dares* to reason is a MAN."

If the reader can and dares to reason, let him reason this matter out and discover whether astronomy as drummed into children's heads at school, and vauntingly displayed, with many pictures, from public platforms, has one inch of standing ground, or one *reason* to offer as an apology for its further existence and power to befool mankind longer. These are strong statements, but not stronger than the facts warrant.

"The Story of the Heavens," by Sir Robert Ball, is not only an authoritative treatise, which it is, coming from such a recognised exponent of the "science"; but a fulsome account of general principles and details in popular form. As a literary production, it possesses considerable merit, and its good English entitles it to the respect and consideration of all its readers. But as a contribution to science, it is the most absurd and unreasoning conglomeration of nonsensical and impossible ideas I have ever read.

On page 110 of this book, we read that

"Kepler found that the movements of the planets could be explained by *supposing* that the path in which each one revolved was an ellipse. This in itself was a DISCOVERY of the most commanding importance."

To explain anything by a supposition, and then to label the supposition a *discovery* is ridiculous in the "domain of science" and a marvel of literary ingenuity.

On the same page, the first law of planetary motion is enunciated in these words, "each planet revolves around the sun in an elliptical path, having the sun as one of the foci," and on page 112 the ellipse is shown with the sun in one focus. Throughout the book, however, the other focus is not mentioned, and it is very evident from the diagram that if the sun were of sufficient power to retain the earth in its orbit when nearest the sun, when the earth arrived at that part of its elliptical path farthest from the sun, the attractive force (unless very greatly increased) would be utterly incapable of preventing the earth rushing away into space "in a right line for ever," as astronomers say.

On the other hand, it is equally clear that if the sun's attraction were just sufficient to keep the earth in its proper path when farthest from the sun, and thus to prevent it rushing off into space; the same power of attraction when earth was nearest the sun would be so much greater,

that (unless the attraction were very greatly diminished) nothing would prevent the earth rushing towards and being absorbed by the sun, there being no counterbalancing focus to prevent such a catastrophe! As astronomy makes no reference to the increase and diminution of the attractive force of the sun, called gravitation, for the above necessary purposes, we are again forced to the conclusion that the great "discovery" of which astronomers are so proud is absolutely non-existent. The law of dynamics, assisted by geometry, makes it, as the learned say, "mathematically certain" that no such force as gravitation exists anywhere in the universe. As another has well said, its invention must be regarded as a blunder of a superstitious age.

If the earth were the globe of astronomical invention, and if gravitation were needed to keep it in its path around the sun, it is easily seen that gravitation must be circular, as then and then only, would the attraction be equal in every part of the path, and so cause the earth to describe an exact circle throughout the year. Astronomers say that the earth moves and not the sun. And that this movement of the earth causes the seasons. And further, that the movement of the sun which we see is *really* caused by the movement of the earth. If, therefore, the sun *appears* to make an exactly circular path every day of the year, there might be some ground for the astronomers' supposition of gravitation. That the sun's path is an exact circle for only about four periods in a year, and then of only a few hours—at the equinoxes and solstices—completely disproves the "might have been" of circular gravitation, and by consequence, of all gravitation.

It has long been pointed out that gravitation, if it existed at all, must be circular, as the following from Drapers' "Conflict between Religion and Science," page 168, shows:

"Astronomers justly affirm that the book of Copernicus, 'De Revolutionibus,' changed the face of their science. It incontestably established the heliocentric theory. It showed that the distance of the fixed stars is infinitely great, and that the earth is a mere point in the heavens. Anticipating Newton, Copernicus imputed gravity to the sun, the moon and heavenly bodies, but he was led astray by assuming that the celestial motions must be circular. Observations on the orbit of Mars, and his different diameters at different times, had led Copernicus to this theory."

That the paths of the orbs of heaven are not exactly circular disproves the theory of gravitation entirely.

It is impossible to make a ball tied to the hand with a

string revolve in an elliptical path, circular motion only being possible. So we may consign the illustration, together with the thing it is intended to illustrate, into oblivion.

The volume already quoted, "Sun, Moon, and Stars," states, on page 73, that

"Comets obey the attraction of the sun, *yet he appears to have a singular power of driving the comets' tails away from himself.* For, however rapidly the comet may be rushing round the sun, and however long the tail may be, IT IS ALMOST ALWAYS FOUND TO STREAM IN AN OPPOSITE DIRECTION FROM THE SUN."

Here we have an acknowledged failure of the law of gravitation, which is said to be universal. Now comes a declaration which supports my contention that gravitation is non-existent.

In "Science and Culture," by Professor T. H. HUXLEY, page 136, the following statement is made :

"If the law of gravitation EVER FAILED TO BE TRUE, EVEN TO THE SMALLEST EXTENT, for that period, the CALCULATIONS OF THE ASTRONOMER HAVE NO APPLICATION."

After such an "authoritative" declaration, we may well dismiss the subject, and we are fairly entitled to conclude, with such a consensus of evidence against the commonly received "view" of gravitation, together with the application of the principles of sound logic, that GRAVITATION HAS NOT AND NEVER HAD ANY EXISTENCE, and the idea of such a force must be relegated to the limbo of mythology.

GEOLOGY.

In "Geology," by Skertchley, page 101, it is confessed :

"So imperfect is the record of the earth's history as told in the rocks, that we can never hope to fill up completely all the gaps in the chain of life. The testimony of the rocks has been well compared to a history of which only a few imperfect volumes remain to us, the missing portions of which we can only fill up by conjecture. What botanist but would despair of restoring the vegetation of wood and field from the dry leaves that autumn scatters? Yet from less than this the geologist has to form all his ideas of past floras. Can we wonder then at the imperfection of the geological world?"

The Vice-President of the Royal Geographical Society of Ireland holds that this, the only earth, was made during six successive periods, corresponding to six series of rocks,

and that particles of mud and sand deposited by rivers in sea bottoms could only become rocks of a heterogeneous mixture, but never such as the primary with sub-divisions, having each its own marked peculiarities. In his "Errors of Geologists," page 15, he says:

"Neither the brown gneiss, nor the primary red sandstone, nor the yellow quartz rock, nor the gray mica slate, nor the blue limestone. Not one band out of all these could be formed out of the river sediment coming down from the pre-existing continents, because not one of them has mixed particles. The quartz rock has no lime, the limestone is purely crystalline, &c."

Although the deepest mine in the world is only a few thousand feet down, the assertions of geologists that they know what underlies the "crust" of the earth to a depth of 4,000 miles, are received as though they had actually been down making a personal inspection and favoured the world with the result of their researches. Sir D. Brewster, in his "More Worlds than One," says:

"The proportional thickness of these different formations have been *estimated* by Professor Phillips as follow, but the numbers can be regarded only as a *very rude estimate*:—Tertiary 2000 feet, Cretaceous 1000 feet, Oolite and Lias 2500 feet, New Red Sandstone 2000 feet, Carboniferous 10,000 feet, Old Red Sandstone 9000 feet, Primary Rocks 20,000, equals NINE MILES nearly."

"On these ASSUMED data they founded different theories of volcanoes."

"It is TAKEN FOR GRANTED that many of the stratified rocks were deposited at the bottom of the sea by the same slow processes which are now going on in the present day."

Almost needless to remark that whatever speculations have nothing better than "taken for granted" to support them, must be rejected as purely fanciful and utterly incapable of proof. Geologists are very fond of parading their knowledge (:) of what they are pleased to term the "glacial period" of the earth's history. Sir R. Ball writes a book on "The Cause of an Ice Age." But he vitiates the entire volume by stating:

"I have found it necessary to ASSUME the existence of several ice ages."

He then goes on to endeavour to prove his assumption to be correct by stating:

"In fact it might almost be said that the astronomical theory (of accounting for ice ages) must be necessarily true, as it is a *strictly mathematical consequence* FROM THE LAWS OF GRAVITATION."

We have already seen that this magical, indefinable, *what-do-you-call-it* influence has no existence. We may,

therefore, reject the learned writer's "mathematical consequence" as a myth.

In his "Second Appeal to Common-sense from the Extravagance of some Recent Geology," Sir H. H. Howorth, K.C.I.E., M.P., F.R.S., F.G.S., says :

"One of the chief objects of this book is to show that the Glacial theory, as usually taught, is not sound; but that it ignores, and is at issue with, the laws which govern the movements of ice, while the geological phenomena to be explained refuse to be equated with it. This is partially acknowledged by the principal apostles of the ice theory. They admit that ice as we know it in the laboratory, or ice as we know it in glaciers, acts quite differently to the ice they postulate, and produces different effects; but we are bidden to put aside our puny experiments which can be tested, and turn from the glaciers which can be explored and examined, to the vast potentiality of ice in shape of portentous ice-sheets beyond the reach of empirical tests, and which we are told acted quite differently to ordinary ice. That is to say, they appeal from sublunary experiments to *a priori* argument drawn from a transcendental world. Assuredly this is a curious position for the champions of uniformity to occupy."

"I hold that the Glacial Theory, as ordinarily taught, is based, not upon induction, but upon hypotheses, some of which are incapable of verification, while others can be shown to be false, and it has all the infirmity of the science of the Middle Ages. This is why I have called it a Glacial Nightmare. Holding it to be false, I hold further that no theory of modern times has had a more disastrously mischievous effect upon the progress of Natural Science."

"I not only disbelieve in, but I utterly deny, the possibility of ice having moved over hundred of miles of level country, such as we see in Poland and Russia, and the prairies of North America, and distributed the drift as we find it there. I further deny its capacity to mount long slopes, or to traverse uneven ground. I similarly deny to it the excavating and denuding power which has been attributed to it by those who claim it as the excavator of lakes and valleys, and I altogether question the legitimacy of arguments based upon a supposed physical capacity which cannot be tested by experiment, and which is entirely based upon hypothesis. This means that I utterly question the prime postulate of the glacial theory itself."

In the *Scientific American Supplement* of 10th September, 1898, in an article on "Glacial Geology in America," by H. L. Fairchild, the following is stated :

"The cause of the glacial period remains quite as much a mystery as it was in 1840. A large body of fact has been collected, but it points in different directions. *Every person has entire liberty of opinion.* MOST GLACIALISTS HAVE NO OPINION AT ALL UPON THIS SUBJECT."

The reader need not trouble to have any opinion on the subject, for *there never was a glacial period in the history of the world.* We challenge the whole scientific world to prove the *romance.*

A. McInnes, in his paper "The Flood and Geology," says:

"Next, how was the flood caused? Moses says by the opening of the netting (not windows) of heaven to pour down rain, and by the opening of the fountains of the great abyss of waters. What deplorable ignorance prevails regarding the true constitution of the universe! The old pagan delusion of Pythagoras is now generally believed in opposition to common sense, reason, and God's own revelation—that men are now living on an impossible large ball of land and water, flashed above and round the sun more quickly than a thunderbolt. Thus the apostle's prediction is fulfilled, that men in the last days would not endure sound doctrine, but would give heed to fables. As of old so now, 'they glorify not God, but have become vain in their reasonings and their heart is darkened. Professing themselves wise they have become fools.'—Romans i. 21.

"We have God's own revelation—Job xxxviii.—manifestly opposed to the fables now falsely called science. God asks of Job—'Where wast thou when I laid the foundation (Heb. fixed) of the earth?' Where has the earth or land been fixed? 'He has founded it upon the seas, and established it upon the floods.'—Ps. xxiv. 2. 'The earth *standing* out of the water and in the water.'—2nd Peter iii. 5. Thus the land does not, as is assumed without proof by modern astronomers, contain the sea; but the sea contains the land, and is the great abyss out of which the dry land appeared at God's creative word.—Gen. i. 9. Likewise, the antarctic icebergs surround the sea on every side, utterly baffling all attempts of navigators to proceed further south. 'Who shut up the sea with doors, and prescribed for it my decree, and set bars and doors, and said: "Hitherto shalt thou come, but no further; and here shall thy proud waves be stayed."?'—Job xxxviii. 8. Next, as to the structure of the earth it was asked: (v. 5) 'Who has set its layers?' or, 'laid its measures?' 'Or, who stretched out a measuring line upon it?' 'On what are its bases (or sockets) sunk?' 'Or, who laid down its key-stone rock?' This rendering is precisely according to the Hebrew. Now, does not the fifth verse plainly declare that the earth's strata or layers were arranged by God himself, and not according to suppositions of modern geologists? The layers are found to be set with the regularity and exactness of the stones of a house, and as if the builder's measuring line had been used. The unstratified or key-stone rock, whether basalt or granite, lowest on the sea, but above are the various beds according to density, such as sandstone, slate, limestone, coal, chalk, clay, with sand, gravel or soil on the surface. How the all-wise God did 6,000 years ago produce by His almighty word the vast construction of the earth's interior in such wonderful order, and all within a few hours, not during millions of years as the geologists foolishly suppose, is the awful mystery. God's ways are not as man's nor His thoughts as ours. He also in the beginning made all the various kinds of animals, not according to a slow process of growth or development; but the birds and fishes on the fifth day, beasts, creeping things and man on the sixth day, each kind separate from the other, contrary to the

atheistic supposition of evolution; and the day limited by the evening and morning, 12 hours. 'Are there not 12 hours in the day?' asked the Lord.

"Thus the whole mighty mass of rock, stratified and unstratified, has been made to float upon the unfathomable waters, yet as securely fixed as a ship in a Liverpool dock. The bases of the earth are so sunk as to make it immovable for ever. Man is challenged to tell how. 'Upon what are its bases sunk?'—Job 38. 'He founded the earth on its basis; it is not moved for ever and ever.'—Ps. 104, 5. Now, why can an iron ship float, though that metal is seven times heavier than water? Because, chiefly of the shape. But the heaviest rock is only three times the weight of water. Then consider the tremendous buoyancy of the ocean causing some substances to float on the surface, and others to sink only to a certain depth. The earth, its density decreasing from the foundation rock upwards to the soil of the surface, is sunk to a depth several miles in the sea, yet so as to have a dry surface, and shores on a level with the surrounding waters. It consists of four continents of an irregular and somewhat triangular shape, stretching out from the central north, thousands of miles towards the icy barriers of the far south, against which winds and waves rage in vain. The continents are connected by sub-marine rocky beds, varying in depth, whilst the Arctic and Antarctic oceans are found to be unfathomable.

"The flood, as we have seen, was caused by the opening of the netting of heaven and the fountains of the abyss. The heaven or sky 'is an expanse for the clouds, strong as molten mirror.'—Job 37, 18; and was made on the second day of creation to separate the waters above from the waters below. 'Hast thou come to the springs of the sea?' asks God—38, 16. It was formerly the opinion of Christian writers that these springs or fountains are in the central north, confined by the impenetrable walls of ice, which were broken down at the flood. However, when Noah had entered the ark, from heaven and the abyss rushed the waters to fulfil God's purpose to destroy the earth with its inhabitants. Hence, the rending of rocks, the shattering of hills, the breaking up of the earth's strata, the piling of mass upon mass, wherein were buried animals and plants to be dug up many centuries afterwards. All lands were filled with the wreck of the old world—a terrible warning to all future ages against the commission of unrighteousness.

"And, let it be noted that the petrification of fossils is not surprising, seeing that the earth was wholly sunk under the waters for a whole year. Even geologists confess that the degree of petrification is no proof of the antiquity of a fossil. 'The mere amount of change, then, which the fossil has undergone, is not by any means a proof of the length of time that has elapsed since it was buried in the earth; as that amount depends so largely on the nature of the material in which it was entombed, and on the circumstances that have since surrounded it.'—Jukes, p. 190.

"Then, what was the origin of the rocks, indeed of the entire earth? Aqueous, according to Genesis, 1, 1, 2. 'In the beginning of God's framing the heavens and the earth, the earth

was in loose atoms and empty.' (Hebrew.) Where were the loose atoms? In the abyss of waters; and God on the third day of creation consolidated all into rocks, stratified and unstratified, causing the land to appear.

"But, why is man not found as a fossil embedded among the rocks, as are the animals? The answer is not difficult. Before the flood man was not so prolific as now. During the 1656 years of the old world there were, according to Moses, only ten generations counting from Adam to Noah; and Noah during 600 years had only three sons. However, let us reckon approximately the antediluvian population, allowing eight children to each couple. 1st generation, 2; 2nd generation, 8; 3rd generation, 32; 4th generation, 128; 5th generation, 512; 6th generation, 2,048; 7th generation, 8,192; 8th generation, 32,768; 9th generation, 131,072; 10th generation, 524,288. The sum is 699,050; and the whole human population before the flood might not amount to one-sixth of the population of London. Be it remembered that mankind in the old world dwelt in Asiatic Turkey, speaking the same language, and it was not till after Noah's death that the dispersion from Babel over the earth took place. Asiatic Turkey contains at present fifteen million human beings, and there only could fossilised man be found. To what extent, if at all, has that country been geologically examined?

"Is it possible to deliver men from the spell and sorcery of 'great names?' If only a fable or lie is called scientific, and fathered by a writer reputed a 'great man,' how many thousands believe at once without proof? Is it not as hard to turn men from the worship of their fellow-worms, as to turn a Hindoo from the worship of sticks and stones? The scientific favourites of newspaper scribblers are larded over with flattery until the reputation of greatness is attained; and to argue against pet scientific fictions is only to provoke silly jesting or astonishment at the presumption of daring to differ from the scientific slave-drivers. Will any of their slaves of science dare be free, or use their common-sense?"

"Is geology not a tissue of suppositions from beginning to end? Let us see. How do the Geologists manage to get dupes? Some disguised infidel who has had sufficient influence to obtain a professorship in a college writes a book about the Creation, in which he attempts to prove to the entire satisfaction of atheistic journalists that the world made itself without the help of God at all. Of course the blasphemous character of the book is carefully veiled, lest soft-headed religionists take alarm, and the book does not sell. Perhaps even a pious whine is dropped so that the work of Judas may be done more effectually; and the author is reputed so very great a man, for all the newspapers say it. By way of preface astronomy is appealed to as a science so well-established that none but fools object to it; therefore, the reader must imagine all the vast continents and oceans making up a ball no larger than the school room globe. Next he is assured that recent researches in science have proved that those lights, the sun, moon, and stars, consist of the very same constituents as the earth and sea, as well as the nebulae, which science supposes to be clouds of glowing gas. So all these must have had a common origin, and, therefore, the simpleton must next imagine

the school room globe along with sun, moon and stars, changed into a quantity of fiery gas. In the beginning—how many million years ago science cannot yet decide—was gas, is the dogma of Geology. But he dare not ask about the origin of the gas itself. Then the mesmerist requires him to suppose that all the fiery mass very conveniently began to cool, particularly a quantity in the centre, which also whirled about until it became the sun."

"The victim of duplicity is next to suppose that other quantities also cooled until they changed into planets. Especially one quantity went on cooling until it very conveniently became the earthball with a rocky crust, and though on fire originally, yet a portion of it changed into all the oceans and seas. 'In the study of science,' says Dr. Dick in his book on Geology, 'one is permitted to suppose anything if he will but remember and acknowledge to others that he only makes suppositions; will give reasons to show that his suppositions may be true, and be ready at any time to give up his suppositions when facts go against them. The last of these two suppositions, namely, the gradual cooling of the world from a state of intense heat, is often made by those who wish to form to themselves a notion of how the rocks and rivers, mountains and plains of the world have been brought to exist as they are.' p. 10. Can the foolish Geologists, instead of making these absurd suppositions, not believe the fact that God made the world as stated on God's own authority? Instead, however, of opening their eyes they further suppose that despite the cooling, as much fire remained inside the ball as heaved up the rocky crust into mountain chains, whilst the waters went on channelling and levelling so as to make all the river and ocean beds. Then the rivers would carry down to lakes and seas matter containing animal and vegetable remains to form sediment, which we must suppose hardened after millions of years into rocks, especially the stratified ones, the unstratified rock being supposed due to the original fire. All these atheistic suppositions are expressed in words of Greek origin so as to amaze the gaping simpleton. The rocks immediately above the unstratified are called metamorphic. Next in ascending order are the palæozoic or primary, the mesozoic or secondary, the cainozoic including the tertiary and quaternary. The guesses about fossils make up Palæontology.

"Now, let it be observed that not one of these suppositions is even probable. Who ever saw gas changed into granite, or a fiery vapour into water, or a river channel its own bed? Is there within the memory of mankind one considerable mountain more or less on the earth—notwithstanding volcanic eruptions and earthquakes—one considerable county more or less, or what continent has materially changed its shape? What do fossils prove? The following is a confession from Skertchly's Geology, p. 101:—'So imperfect is the record of the earth's history, as told in these rocks, that we can never hope to fill up completely all the gaps in the chain of life. The testimony of the rocks has been well compared to a history of which only a few imperfect volumes remain to us, the missing portions of which we can only fill up by conjecture. What botanist but would despair of restoring the vegetation of wood and field from the dry leaves that Autumn scatters? Yet from less than this the Geologist has

to form all his ideas of past floras. Can we wonder then at the imperfection of the geological world?' Indeed it is confessed that the age of a fossil is not determined by the degree of its petrification, but by the age of the rock in which it is imbedded; and the age of the rock by its position among the strata. Have men in these last days become so silly that with old bones and stones, and foot-marks, they may be led to deny the very God that made them? But was not this folly foretold ages ago by the inspired Hebrew prophets?

"Each layer of rocks is supposed by Geologists to have occupied an indefinite number of millions of years, and the age of the earth is still more a mystery to them. Professor Thomson, who is a scientific dictator, has, however, announced that the solidification of the earth could not have taken less than 20,000,000 years, and not more than 400,000,000 years, and so that the date of the world's beginning is somewhere between these two numbers. Some time ago Geologists proved from scientific data (to their own entire satisfaction and that of their dupes), that the earth is a ball of liquid fire with a thin crust of rock, so that at a depth of 25 miles the rocks must melt, and at 150 they would go off in vapour. (Dr. Dick's Natural History, p. 12). But Professor Thomson has found out that those suppositions do not square with the supposition of gravitation, and accordingly he supposes rather that the mass of the earth can not be much less rigid than a globe of steel of the same size would be, yet that there must be some quantity of the fiery liquid left in the interior, enough at least to cause earthquakes and volcanic eruptions. What tinkering the imaginary globe of the astronomer needs?

"Some geologists, such as Jukes, are not certain whether the earth was a molten mass at first, and whether granite is of igneous or aqueous origin. Formerly rocks were classified as primary, transition, secondary, tertiary, recent, but now by a new arrangement the transitional rocks are denied any place in the series. Jukes says that he holds 'views with regard to the Devonian period which differ from those taken by most geologists, and that the question is hardly yet settled,' p. 203. Also, regarding the stratified rocks, he observes, 'that at one time it was thought that there was some essential distinction in the nature of these rocks, and their mode of formation. It is now known that the primary rocks when first formed were exactly like the corresponding secondary and tertiary,' p. 202. Indeed, is there anything certain about geology except that it is disguised atheism denying God the Creator?

"Geologists profess to prove extinct species. Of course they can produce large bones to show that at one time there were large elephants and lizards, but are big dogs not dogs as really as little ones? Is it a fact according to Moses, there were human giants before the flood, and that, since the lower animals have degenerated in size and age as well as men, need not surprise this nineteenth century of crime and infidelity. But the trick of comparative anatomy is to claim with an old bone the power of reproducing the sketch of the entire animal, though formerly unknown. If the monkey had been unknown to Darwin and the scientists, would they have been able by seeing one

hand only, to tell that that beast has four hands? If zoologists think the serpents once had wings or feet, let them read Genesis iii. 14—"On thy belly shalt thou go." Let scientists be concluding that any kind of animal has become extinct consider the words of Jukes himself: 'As *all the truth* about anything whatever is absolutely unattainable by us, it would only lead us astray if we required it from Geology, or reasoned as if we had attained it,' p. 202. But recently the existence of the gorilla became known. What of the leviathan, the swift serpent, the crooked serpent, the dragon that is in the sea,—Isa. xxvii. Is it not chiefly the fossilised bones of the sea serpent that geologists are exhibiting as the remains of extinct species of a vast size? No wonder the present existence of the leviathan is so eagerly denied."

S. Laing, in his "Modern Science and Modern Thought," page 27, informs us that

"The total thickness of *known strata* is about 130,000 feet, or 25 miles of this, about 30,000 feet belong to the Laurentian, which is the oldest known stratified deposit, 18,000 to the Cambrian, and 22,000 to the Silurian. These form together what is known as the Primary or Palæozoic Epoch."

Mr. Laing is very careful to omit the names of those who *know* strata for a depth of 25 miles. Can it be that he has been down there himself? If so, we may expect to have further revelations as to the contents of the bowels of the earth. But no, he cannot have been there, for he tells us a little further on (page 37):

"At this rate of increase water would boil at a depth of 10,000 feet, and iron and all other metals be melted before we reached 100,000 feet."

We are thus satisfied that the gifted author was not actually there, *or he would have been melted in company with "iron and all other metals."* This is a relief, and enables us to at once and for ever dispose of his wild theories as baseless assumptions. In a certain case before the Magistrate, the culprit hardly liked to say that the witness against him was telling a lie, so he mildly said that the witness was "handling the truth very carelessly." When Mr. Laing has the impertinence to tell us what lies below the surface of the earth for a depth of 25 miles we are bound to say that he handles the truth in a careless and most reprehensible manner.

With the usual unqualified manner for which scientists have become famous, Mr. Laing goes on to say:

"Reasoning from these facts, ASSUMING the rate of change in the forms of life to have been the same formerly. . . .

. . . Lyell has arrived at the conclusion that Geology requires a period of not less than 200,000,000 of years to account for the phenomena which it discloses."

To reason from *facts* and then to assume something which in its very essence is utterly incapable of proof, is bad enough ; but to mis-call fictions facts and then to add on to them whatever assumption is necessary to maintain the *result* in keeping with the theory with which the start was made, is so atrocious that we are again forced to the conclusion that Geologists are lost in the fogs of their own creation, and cannot find their way through the millions of ages of their own imagination, to anything having the remotest bit of truth in it. Once more, and I have done with Mr. Laing and his Geology. He informs us in the work already referred to that :

" The law of gravity, which IS THE FOUNDATION OF MOST OF WHAT WE CALL THE NATURAL LAWS OF GEOLOGICAL ACTION has certainly prevailed, as will be shown later, through the enormous periods of geological time and far beyond this WE CAN DISCERN IT OPERATING in those astronomical changes by which cosmic matter has been condensed into nebulae, nebulae into suns throwing off planets, and planets throwing off satellites, as they cooled and contracted."

The laws of geological action being based on a myth—the law of gravitation, Geology itself may be "thrown off into space" without any ill effects being felt anywhere.

GEOLOGY and ASTRONOMY as at present taught by the schoolmen are nothing more than fables.

Hear what *The Future* of February, 1892, says :

" Astronomers are very fond of boasting of the wonderful exactness of their science, and that it is based on the principles of incontrovertible mathematics ; and of ridiculing astrology as a *pseuda-science*. The exactness belongs to practical and not to theoretical astronomy. For example, when the writer learnt the principles of astronomy at school, he was taught that the Sun was exactly 95 millions of miles from the earth ; now-a-days astronomers say that this was an error, and that the Sun is only 92 millions of miles distant. Newton made the Sun's distance to be 28 millions of miles, Kepler made it 12 millions, Martin 81, and Mayer 104 millions ! Dr. Woodhouse, who was professor of astronomy at Cambridge about fifty years ago, was so candid as to admit the weakness of the Newtonian speculations. Woodhouse wrote : ' However perfect our theory, and however simply and satisfactorily the Newtonian hypothesis may seem to us to account for all the celestial phenomena, yet we are here compelled to admit the astounding truth that if our premises be disputed and our facts challenged, the whole range of astronomy does not contain the proofs of its own accuracy.' "

THE HORIZON.

According to tables of curvature compiled to suit the mathematical factors and tentative formulas employed in the imaginary geodetic operations, which have from time to time been conducted in observatories, the horizon of an observer is distant or near according to the greatness or otherwise of his elevation above the surface of the supposed globe. If he stands 24 feet above sea level, he is said to be in the centre of a circle which bounds his vision, the radius of which in any direction, on a clear day, is six miles.

A local gentleman tells me that he has watched a boat-race in New Zealand, seeing the boats all the way out and home, the distance being 9 miles from where he was standing on the beach. I have seen the hull of a steamer with the naked eye at an elevation of not more than 24 feet, at a distance of 12 miles, and in taking observations along the South African coast, have sometimes had an horizon of at least 20 miles at an elevation of 20 feet only. The distance of the horizon, or vanishing point, where the sky appears to touch the earth and sea, is determined, largely by the weather, and when that is clear, by the power of our vision. This is proved by the fact that the telescope will increase the distance of the horizon very greatly, and bring objects into view which are entirely beyond the range of vision of the unaided eye. But, as no telescope can pierce a segment of water, the legitimate conclusion we are forced to arrive at, is that the surface of water is level, and that, therefore, the shape of the world cannot be globular, and on such a flat or level surface, the greater the elevation of the observer, the longer will his range of vision be, and thus the farther he can see.

ON THE TERM "LEVEL."

Advocates of the globular form of the world often fall back on the meaning of the term "level," affirming that a level surface means an even surface and not a horizontal or flat one. That is to say that a convex surface if free from irregularities is even or level. In "Nuttall's Standard Dictionary," 1892 Edition, page 409, the following is the definition of level—"Horizontal, even, flat, on the same line of plane." This

shows that level is the same as horizontal or flat, and could not possibly apply to a convex surface. In the "Cruise of the *Falcon*," by E. F. Knight, the following occurs on page 2 of volume 2 :

"There are no curves on the way, the rails being carried in one perfectly straight line across the level plains."

Level here means flat or horizontal, as the plains in South America are known to be for thousands of square miles.

"Robinson's New Navigation and Surveying," page 25, says :

"The spirit level, which is usually on the under side of the Surveyor's transit instrument, is used to determine a horizontal line. A horizontal line is at right angles to a vertical. It is a level line."

The following is from the same work, page 33 :

"To adjust a theodolite, measure very carefully the distance between two stations, and set the instrument half way between them. Now bring the level near to one of the stations, level it carefully and sight the rod. Note the number on the rod, say six feet, and have the rod man go to the other station and place his target on the rod just six feet. When the telescope is turned upon it the horizontal spider line ought to just coincide with the target, and will, if the instrument is level or in perfect adjustment."

From the foregoing it is very clear that level means horizontal and cannot mean convex.

G. F. Chambers, in his "Story of the Solar System," pages 84 and 85, quotes Sir H. Holland as seeing the eclipsed moon with the sun above the horizon. I quote the following from Mr. Chambers :

"This spectacle requires, however, a combination of circumstances rarely occurring—a perfectly clear eastern and western horizon, and an entirely level intervening surface such as that of the sea or the African desert."

In a lunar eclipse such as described, the sun is distant from the moon half a circle, or 180° , both luminaries being 90° from the observer, so that on a convex surface it would be impossible to see both bodies at the same time, but quite possible from a level or horizontal surface, which actually was the case. To see about 6,000 miles to the sun on the one side and about 6,000 miles to the moon on the other side, one would require to be projected 4,000 miles into space above the horizon of the globe in order to overcome the *convexity in the distance*. Thus, level, we are again assured,

means horizontal or flat, or on the same line of plane, as the dictionary informs us. "In the "Voyage of a Naturalist," by C. Darwin, page 328, the following is stated :

"I was reminded of the Pampas of Buenos Ayres by seeing the disc of the rising sun intersected by an horizon level as that of the ocean."

The surface here referred to was a flat one, and such are called Llanos or level fields in South America. Level, therefore, signifies flat or horizontal.

LIGHTHOUSES.

The distance at which lights can be seen at sea entirely disposes of the idea that we are living on a huge ball.

From a tract, "The Bible *versus* Science," by J. C. Akester, Hull, I extract the following :

"A lighthouse on the Isle of Wight, 180 feet high (St. Catherine's), has recently been fitted with an electric light of such penetrating power (7,000,000 candles) that it can be seen 42 miles. At that distance, according to modern science, the vessel would be 996 feet below the horizon."

Extract from a letter written by a passenger on board the "Iberia," Orient Line, R.M.S.—"At noon on Thursday, 27th of September, we were 169 miles from Port Said ; by the ship's log, our rate of steaming was 324 miles in 24 hours. At 12 p.m., we were alongside the lighthouse at Port Said, it having become visible at 7.30 when it was about 58 miles away. It is an ordinary tower, about as high as the tower at Springhead (60 feet), lit by electricity." According to modern science, the vessel would be 2,182 feet below the horizon.

Extract from "Manx Sun," July 24th, 1894.—"The weather of late has been very fine. It was a splendid sight, on Sunday evening, to see the land in Ayr, and Cumberland, so clear that houses could be seen with the naked eye ; and the smoke from Whitehaven, and other towns, could be seen very distinctly. Ramsey Bay appeared as if it was enclosed by the surrounding land, from Black Coombe to the Point of Ayr, Welney light being seen distinctly, distance 45 miles."

In February, 1894, a discussion on the subject of the shape of the world was carried on in the columns of the *Cape Argus* (Capetown), by the writer on the one side, and three antagonists on the other. From the evidence of the editor of the paper in a foot-note to the first letter of "Ancient Mariner" that Dassen Island light had been seen from the *each road at Sea Point*, it was shewn that water is level.

This light is 155 feet above sea level at its focal plane, and according to the published report of the Inspector of Public Works for 1893, had been seen from the bridge of a mail steamer more than 40 miles away. This "ancient mariner" did not believe, and asked "if anything had gone wrong with the shape of the earth hereabouts." One of his supporters, in a letter to the paper—after the editor had stated that the light had been seen from the beach road at Sea Point (33 miles)—stated that by climbing a hill so many feet the light might be seen! Thus will ignorant prejudice flaunt itself in the face of truth. If the earth were a globe it is evident that Dassen Island light could not be seen from a steamer's bridge 40 miles away, nor from an elevation of 20 feet at a distance of 33 miles. In the former case, allowing 40 feet for altitude of observer, the light would be 871 feet below the horizon, and in the latter 551 feet below. At the close of the controversy, I challenged "Ancient Mariner" to test the case by an appeal to an experiment on the waters of Table Bay, and am still waiting an acceptance of that challenge. I am now credibly informed that the Bluff light, Natal, has been seen at sea from a distance of 30 miles. This light is 282 feet above sea level, and should, according to the globe theory, have been 298 feet below the horizon, allowing 20 feet for height of observer!

Another and an unconscious witness to the fact of the horizontality of water, is Mr. Smith, of Cape Point, as the following shows:

A LIGHT FROM AFAR.

TO THE EDITOR OF THE "CAPE TIMES."

Sir,—At nine o'clock this evening the Danger Point light was distinctly visible to the naked eye from the homestead at Cape Point (about 150 feet above sea level), this being the first occasion, since the erection of the Danger Point Lighthouse, on which the flashes of light have been noticed by myself. The light must be most powerful to be seen from a distance of over fifty miles on a clear night. I timed half a minute interval between each three quick flashes.

I am, &c.,

Cape Point, August 22nd, 1894.

A. E. SMITH.

In a letter from the Engineer of Public Works, dated Capetown, 2nd February, 1898, I am informed that:

"The focal plane of Point Danger Lighthouse is elevated 150 feet above high water level."

According to this, therefore, if the world be a globe, the light should have been 1,666 feet below Mr. Smith's line of sight.

In *Answers* of 2nd May, 1896, the following appears :

"The steeple, or stump, as it is locally called, of the Parish Church of St. Botolph, at Boston, on the south-east coast of Lincolnshire, near the Wash, has long been utilised as a light-house. The tower is 290 feet in height, and resembles that of Antwerp Cathedral, being crowned by a beautiful octagonal lantern. This tower BEING VISIBLE 40 MILES DISTANCE serves as a lighthouse to guide mariners when entering what are called the Boston and Lynn Deepes."

According to globular principles this light should be hidden below the horizon for nearly 800 feet.

From "Music and Morals," by H. R. Haweiss, I extract the following:

"The Antwerp spire is 403 feet high from the foot of the tower; Strasburg measures 468 feet from the level of the sea, but less than 403 feet from the level of the plain. By the clear morning light, from the steeple at Notre Dame at Antwerp, the panorama can hardly be surpassed; 126 steeples may be counted, far and near. Facing northward the Scheldt winds away until it loses itself in a white line, which is none other than the North Sea. By the aid of a telescope ships can be distinguished out on the horizon, and the captains declare they can see the lofty spire at ONE HUNDRED AND FIFTY MILES distant; Middelburg at 75 miles, Fleissing 65 miles, are also visible from the steeple; looking towards Holland, we can distinguish Breda and Walladue, each about 54 miles off."

The above spire would be out of sight A MILE BELOW THE HORIZON, at a distance of 150 miles, and as no telescope can pierce a segment of water, the conclusion is that water is level.

The *Earth Review* of July, 1894, says:

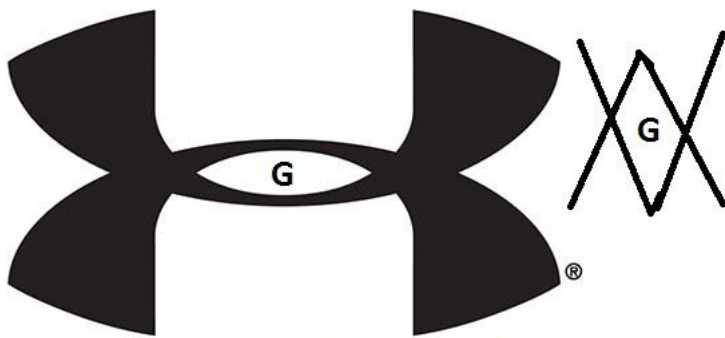
"The Captain of the s.s. *Milo*, referring to the question as to how far a powerful light can be seen, says: 'The other day, when off Skagen, the rays from Hantsholmen lighthouse were distinctly visible, though the light was fully seventy-two miles away.'"

"Mr. B. wrote and asked how the light could be seen unless the lighthouse was 3,500 feet above sea-level? This is the official reply he received.

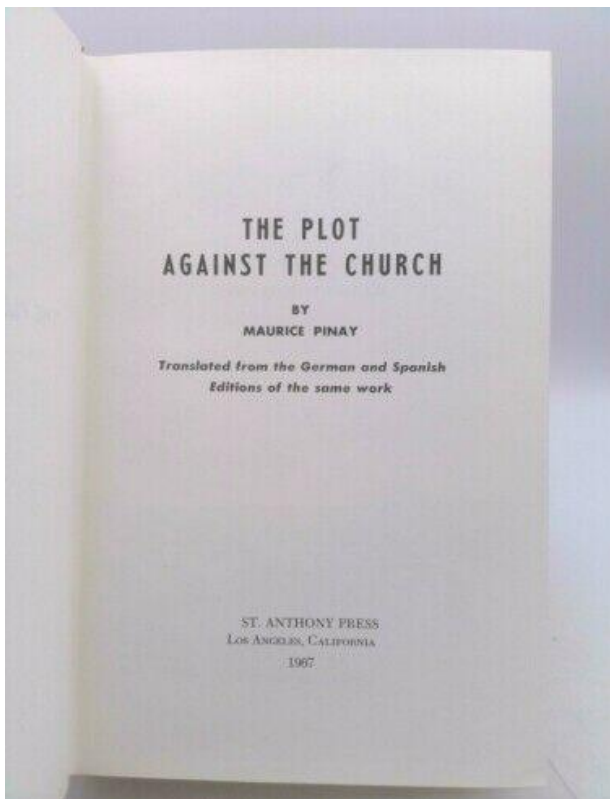
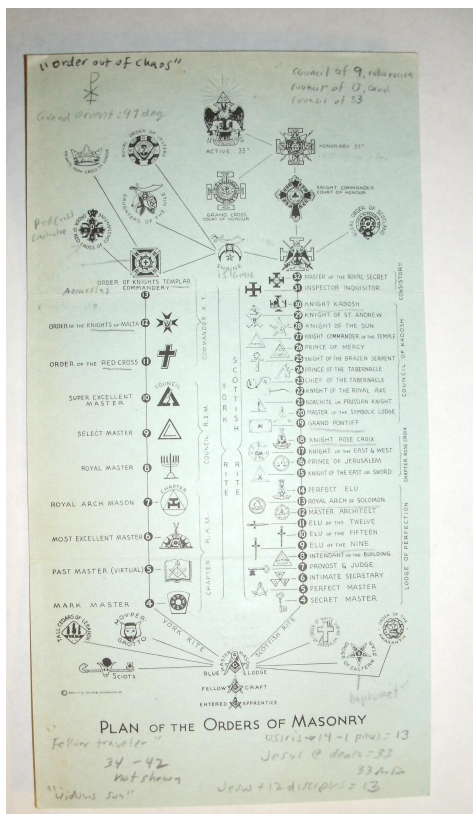
"Editorial Department, Tit-Bits,

"Dec. 21, 1892.

"The paragraph you refer to was sent me by the Captain of the s.s. *Milo*, and he vouched for its accuracy. Under these circumstances I cannot enter into a discussion as to the possibility of his being able to see it or not. P.S.—Mr. B. allowed that the reported observation was made from a mast-head 100 feet above sea-level."



JUDAEO-MASONIC
UNDER / ARMOUR®



In the *Argus Annual* for 1894, it is stated, on pages 207 and 271 :

"Natal Bluff light, 292 feet above water level, has been seen at a distance of 30 miles."

According to globe measurement it should have been about 300 feet below the line of sight.

The *Natal Mercury* of 18th July, 1898, states :

"The Cape L'Aguihas lighthouse is to be reconstructed to allow of the introduction of a flash light. A lighthouse erected two miles from Fish River, has been completed. The tower is 33 feet high and 238 feet above sea level, and the flash light is visible for over 50 miles."

This light would be 1,400 feet below an observer's line of sight at an elevation of 28 feet, if the world is a globe. The following is extracted from *Scraps* of 27th August, 1898 :

"I have recently received the following letter, which, I confess, fogs me just about as much as the writer of it complains of being fogged :

"Sir,—In your issue No. 772 you give an account of the lighthouse at New York—"Liberty enlightening the World." You say the light can be seen sixty miles away at sea, and I think you must be mistaken. A text-book I have by me on surveying and levelling gives eight inches per mile (actually 7.962 inches) as the correction to be made for curvature of the earth's surface in setting out canals, railways, &c., varying inversely with the square of the distance, thus: $60 \times 60 \times 8 \div 12 = 2,400$ feet, and making allowance for the light being 326 feet above sea level, it should be 2,074 feet below the horizon at sixty miles."

"Now (1) either your figures are wrong, or (2) the weight of the statue has flattened the earth for sixty miles round about, or (3) surveyors do not allow eight inches for curvature, and let their canals and railways stick out over the side of the earth like gigantic fishing-rods. I confess I am in a fog. Can you enlighten me in your "Facts and Fancies" column?—Yours truly,

"Foggy."

"I won't attempt to analyze "Foggy's" fogging calculations, but he is certainly very wrong. Any navigator will tell you that the horizon is visible at about fifteen miles from the hurricane deck of a steamer; at twenty from the bridge deck; and at a proportionately greater distance from the masthead. But beyond this you have to remember the added penetration given to lighthouse lights by means of refraction and reflection."

A light can only be seen on the surface of a globe, at a distance the square of which multiplied by 8" (nearly) is equal to its height. This applies no matter how powerful the light may be, because no light can pierce water, nor can the natural eye with or without glass do so.

But, says someone, there is no allowance made for refraction in any of the foregoing calculations. That is quite true, but constitutes no valid objection in the light of the following extract from the "Encyclopædia Britannica," article "Levelling":

"We suppose the visual rays to be a straight line, whereas on account of the unequal densities of the air at different distances from the earth, the rays of light are incurvated by refraction. The effect of this is to lessen the difference between the true and apparent levels, but in such an extremely variable and uncertain manner that if any constant or fixed allowance is made for it in formula or tables, it will often lead to a greater error than what it was intended to obviate. For, though the refraction may at a mean compensate for about one-seventh of the curvature of the earth, it sometimes exceeds one-fifth, and at other times does not amount to one-fifteenth. We have, therefore, made no allowance for refraction in the foregoing formulæ."

We are fairly entitled to conclude, therefore, from the reliable data furnished as to how far lights at sea can be seen, that the world is an extended plane, and not the globe of astronomical speculation.

THE MIDNIGHT SUN.

M. Paul B. du Chaillu, published, a few years ago, a work entitled "The Land of the Midnight Sun," of which the following are extracts:

"The sun at midnight is *always north of the observer*, on account of the position of the earth. IT SEEMS TO TRAVEL AROUND IN A CIRCLE, requiring twenty-four hours for its completion, it being noon when it reaches the greatest elevation, and midnight at the lowest. Its ascent and descent are so imperceptible at the pole, and the variations so slight, that it sinks south very slowly, and its disappearance below the horizon is almost immediately followed by its re-appearance."

"We have here spoken as if the observer were on a level with the horizon; but should he climb a mountain, *the sun of course will appear higher*; and should he, instead of travelling fifteen miles north, climb about 220 feet above the *sea level* each day, he would see it the same as if he had gone north; consequently if he stood at the arctic circle at that elevation, and had an unobstructed view of the horizon, he would see the sun one day sooner. Hence tourists from Haparanda prefer going to *Avasaxa*, a hill 680 feet above the sea, from which, though eight or ten miles south of the arctic circle, they can see the *midnight sun* for three days."

"As the voyage drew to a close, and we approached the upper end of the Gulf of Bothnia the twilight had disappeared, and between the setting and rising of the sun hardly one hour elapsed."

"Haparanda is in $65^{\circ} 51'$ N. lat., and forty-one miles south of the arctic circle. It is $1^{\circ} 18'$ farther north than Archangel, and in the same latitude as the most northern part of Iceland. The sun rises on the 21st of June at 12.01 a.m., and sets at 11.37 p.m. From the 22nd to the 25th of June the traveller may enjoy the sight of the midnight sun from Avasaxa, a hill six hundred and eighty feet high, and about forty-five miles distant, on the other side of the stream; and should he be a few days later, by driving north on the high road he may still have the opportunity of seeing it."

If the earth be a globe, at midnight the eye would have to penetrate thousands of miles of land and water even at 65° North latitude, in order to see the sun at midnight. That the sun can be seen for days together in the Far North during the Northern summer, proves that there is something very seriously wrong with the globular hypothesis. Besides this, how is it that the midnight sun is never seen in the south during the southern summer? Cook penetrated as far South as 71° , Weddell in 1893 reached as far as 74° , and Sir James C. Ross in 1841 and 1842 reached the 78th parallel, but I am not aware that any of these navigators have left it on record that the sun was seen at midnight in the south.

Captain Woodside of the American barkentine *Echo*, at Capetown on 26th June, 1898, reports that he had been a good deal in the great southern ocean, and often when in latitude 62° south he has had a kind of daylight all night, but not sufficient to read by; but the midnight sun was never seen.

Since writing the foregoing I have received from the Secretary of the Royal Belgian Geographical Society a paper, entitled EXPEDITION ANTARCTIQUE BELGE.

In this paper it is stated by Lieut. de Gerlache, the Commander of the expedition, that

"On 17th May the sun set, and was not seen above our horizon again until 21st July."

This was during the severest part of the winter at latitude $71^{\circ} 36'$ south.

On pages 9 and 10 of the same pamphlet it is stated that the ship quitted her winter quarters on the 14th February. She had thus been a winter and a summer in the ice at that latitude. During the winter, the extraordinary phenomenon of total darkness caused by the total disappear-

ance of the sun for two months is duly recorded, and had the sun been seen at midnight in the summer, it is only natural and reasonable that such another extraordinary phenomenon should have been chronicled; but there is not one word in the pamphlet about the matter. We conclude, therefore, that there is no midnight sun in the south. The midnight sun can be seen in the north during the summer at 66° of latitude, and if there be the same extraordinary phenomenon in the south, it must have been seen at the latitude the "Belgica" reached much sooner and longer than it is in the north at latitude 66.

MOTIONS OF THE EARTH.

In "The Story of the Heavens," by Sir R. Ball, the following accounts of the motions of the earth-globe are given, page 3 :

"It became certain that whatever were the shape of the earth, it was at all events something detached from all other bodies and poised *without visible support* IN SPACE."

Page 6 :

"Ptolemy saw how this mighty globe was poised in what he *believed* to be the centre of the universe."

Page 7 :

"Copernicus PROVED that the appearances presented in the daily rising and setting of the sun and stars *could be accounted for* by the SUPPOSITION that the earth rotated."

"The second great principle which has conferred immortal glory on Copernicus, assigned to the earth its true position in the universe. Copernicus *transferred the centre* to the sun, and he established the somewhat humiliating truth that our earth is merely a planet."

Page 87 :

"The *discovery* that our earth *must* be a globe isolated in space, WAS IN ITSELF A MIGHTY EXERTION OF HUMAN INTELLECT."

Page 517 :

"*We know* that the earth rotates on its axis once every day."

After all this unsound speculation, of which we know every line to be false, it is somewhat amusing to listen to another "Professor" of equal authority with the Astronomer Royal of Ireland.

Professor J. Norman Lockyer, in his "Astronomy," section iv., says :

"You have to take it as *proved* that the earth moves. Day and night are *the best proofs* that the earth does really spin. Without this spinning there could be no day and night, so that the regular succession of day and night is caused by this spinning. Hence the appearances connected with the rising and setting of the sun *may be due, either to our earth being AT REST* and the sun and stars travelling round it, *or the earth itself turning round*, while the sun and stars are at rest."

"Our earth" seems to give more trouble to "our astronomers" than all the heavenly bodies put together. If, as Professor Lockyer says, **EITHER THE EARTH IS AT REST** and the stars moving, or *the stars at rest* and the earth moving, how is it that the wise men of the observatories have never once attempted to ascertain data to prove whether it is *the earth or the stars* that move? How is it that they are content to go on year after year, labouring under what is at best but a *supposition* that the earth moves, **WHEN THE PHENOMENA, ACCORDING TO THEIR OWN SHOWING, MAY BE AS WELL ACCOUNTED FOR** either by the earth being at rest, and the sun and stars moving, or the sun and stars being at rest and the earth moving?

In "Wonders of the Sun, Moon, and Stars," by R. Russell, it is stated that :

"The speed of the surface of the earth, in performing its rotations, is 1,526 feet per second. Great as that speed is, it is slow when compared to the earth's progress in its orbit, which is at the rate of 18 miles per second, or *more than 65,000 miles per hour.*"

Then, in "The Story of the Heavens," page 429, we are informed by Sir R. Ball, that :

"Every half hour we are about 10,000 miles nearer to the constellation of Lyra the sun and his system must travel at the present rate for more than *a million years* before we have crossed the abyss between our present position and the frontiers of Lyra."

"Sun, Moon and Stars," by A. Giberne, states that :

"It is the earth that moves, and not the sun ; it is the earth that moves, and not the stars."

From these extracts the reader is given to see by those who have made astronomy their life study, therefore, *ought* to know, that **IN ONE HOUR**

"The earth rotates over 1,000 miles, revolves around the sun, over 65,000 miles, and rushes through space towards the constellation Lyra, a distance of 20,000 miles."

The total rate of rotation, revolution and gyration, amounting to no less than 50,000 miles an hour.

This casts a total eclipse over all that Jules Verne ever wrote. Put together all the imaginary exploits in the air specially written to interest the young, add to this all the wonderful adventures of air-ships recorded in the "Daughter of the Revolution," and tack on to this all the wild and impossible things found in "current libraries of fiction," and I venture to say that the grand total will record nothing so utterly impossible or so supremely ridiculous as this modern scientific delusion of a globe spinning away in space in several different directions at the same time, at rates of speed which no man is able to grasp: with the inhabitants, some hanging heads down and others at various angles to suit the inclination.

Write down all the swindles that ever were perpetrated; name all the hoaxes you ever heard of or read about; include all the impostures and bubbles ever exposed; make a list of all the snares that popular credulity could ever be exposed to, and you will fail in getting within sight or hearing of an imposture so gross, a hoax so ingenious, or a bubble of such gigantic proportions as has been perpetrated and forced upon unthinking multitudes in the name of science, and as proved incontrovertible fact, by the expounders of modern astronomy.

Again and again have their theories been combated and exposed, but as often have the majority, who do not think for themselves, accepted the popular thing. No less an authority in his time than the celebrated Danish astronomer, Tycho Brahe, argued that if the earth revolves in an orbit round the sun, the change in the relative position of the stars thus necessarily occasioned, could not fail to be noticed. In the "History of the Conflict between Religion and Science," by Dr. Draper, pages 175 and 176, the matter is referred to in the following words:

"Among the arguments brought forward against the Copernican system at the time of its promulgation, was one by the great Danish astronomer, Tycho Brahe, originally urged by Aristarchus against the Pythagorean system, to the effect that, if, as was alleged, the earth moves round the sun, *there ought to be a change in the relative position of the stars; they should seem to separate as we approach them, or to close together as we recede from them.* At that time the sun's distance was greatly

under-estimated. Had it been known, as it is now, that the distance exceeds 90 million miles, or that the diameter of the orbit is more than 180 million, *that argument would doubtless have had very great weight.* In reply to Tycho, it was said that, since the parallax of a body diminishes as its distance increases, a star may be so far off that its parallax may be imperceptible. THIS ANSWER PROVED TO BE CORRECT."

To the uninitiated, the words "this answer proved to be correct," might seem to settle the matter, and while it must be admitted that parallax is diminished or increased according as the star is distant or near, *parallax* and *direction* are very different terms and convey quite different meanings. Tycho stated that the *direction* of the stars would be altered; his critics replied that the *distance* gave no sensible difference of *parallax*. This may be set down as ingenious, but it is no answer to the proposition, which has remained unanswered to this hour, and is unanswerable.

If the earth is at a given point in space on say January 1st, and according to present-day science, at a distance of 190,000,000 miles from that point six months afterwards, it follows that the *relative position* and *direction* of the stars will have greatly changed, however small the angle of parallax may be. **THAT THIS GREAT CHANGE IS NOWHERE APPARENT, AND HAS NEVER BEEN OBSERVED, *incontestably proves that the earth is at rest*—that it does not "move in an orbit round the sun."**

That the earth does not "rotate on its axis" is proved by the fact that no observer on the surface of a globe could see half way round it, or for a distance of thousands of miles on either side of him, as he would require to do in order to see round a circle of 180° , to view the setting sun and the rising moon at one time.

Sir Henry Holland, in his "Recollections of Past Life," says that:

"On 20th April, 1837, the moon rose eclipsed before the sun had set."

Now, on a globe of 25,000 statute miles equatorial circumference one has to be 24 feet above sea level to get a horizon of six miles, the "curvature" being 8" to the mile and varying inversely with the square of the distance.

We are thus taught to believe that what appears at all times of the day to be half a circle, or about 180° , is in reality only a few miles, as the earth rotates against the sun and thus deceives us. But the phenomenon of a lunar eclipse requires, according to astronomical doctrine, that the

earth shall be exactly midway between sun and moon, to shut off the light of the sun and thus to darken the moon. These two "bodies" being then, according to the astronomer, opposite each other and the earth between, must each be 90° , or a quarter of a circle distant from an observer on the earth's surface—that is, half a circle from one to the other. So that what astronomy, on the one hand, teaches is only a few miles distant, the horizon, is thus seen to be, according to its own showing, half a circle, for the sun is at one side of one quadrant, and the moon at the other side of another. If, therefore, the observer be on the equator when the phenomenon occurs, he can see, according to astronomical measurement, over 6,000 miles on either side of him, east and west. If in north or south latitude, he would see correspondingly less, but thousands of miles in every case. But, on the other hand, according to the popular theory, he would have to be hoisted 4,000 miles away in space for such a thing to be possible. The fact of lunar eclipses having been observed when sun and moon were both above the horizon at the time of the eclipse, and thus that the observer pierced, with the unaided eye, a distance of thousands of miles on either side of him—about half a circle—proves that the earth does not rotate, and that it is not the globe of popular belief.

Sir Henry Holland further informs us that :

" This spectacle requires, however, a combination of circumstances rarely occurring—a perfectly clear eastern and western horizon, and an entirely *level intervening surface, such as that of the sea, or the African desert.*"

It is this **LEVEL INTERVENING SURFACE** that defies all astronomical attempts to make it convex, and proves beyond the possibility of a doubt that the earth is an extended plane and not a globe.

Furthermore, if the earth-globe rotates on its axis at the terrific rate of 1,000 miles an hour, such an immense mass would of necessity cause a tremendous rush of wind in the space it occupied. The wind would go all one way, and anything like clouds which got "within the sphere of influence" of the rotating sphere, would have to go the same way. The fact that the earth is at rest is proved by kite flying. The following from the "American Exporter" of November, 1897, illustrates this:

" Recently, a very interesting experiment was made in high kite flying at Boston, from the Blue Hill Observatory, when the highest altitude ever reached by a kite was obtained. The top

kite reached a height of 10,016 feet above sea level, or 8,386 feet above the summit of the hill. At the highest point reached the temperature was 38°, while at the ground it was 63°. Above 5,000 feet the wind was from the west, while at the ground there was a southerly wind."

Astronomers are not agreed about the "depth" of the earth's atmosphere, but the lowest estimate is 45 miles. Therefore, everything within the atmosphere would be subject to the gale of wind produced by the mad whirligig of the rotating globe. When, however, we know that "above 5,000 feet the wind was from the west, while at the ground there was a southerly wind," the fact of the earth being at rest again dawns on us. How could there be two different directions of the wind at a distance of only 5,000 feet apart, if globular hypotheses are anywhere near the truth? Spin a top and it will be seen that the rotation of the top causes the air within its sphere of rotation to go all one way.

Let "imagination" picture to the mind what force air would have which was set in motion by a spherical body of 8,000 miles diameter, which in one hour was spinning round 1,000 miles, rushing through space 65,000 miles, and gyrating across the heavens 20,000 miles? Then let "conjecture" endeavour to discover whether the inhabitants on such a globe could keep their hair on? Talk about Jules Verne, he is not in it with the expounders of this "most exact of all the sciences."

A. E. Skellam says :

"The following experiment has been tried many times, and the reasonable deductions from it are entirely against any theory of motion : A loaded cannon was set vertical by plumb-line and spirit-level and fired. The average time the ball was in the air was 28 seconds. On several occasions the ball returned to the mouth of the cannon, and never fell more than 2 feet from its base, as shown in Fig. 1 (figures omitted). Now, let us see what the result would be if the earth were a rapidly rotating sphere. The ball would partake of two motions, the one from the cannon, vertical, and the other from the earth, from west to east, and would arrive at B, Fig. 2 ; while it had been ascending, the earth, with the cannon, would have gone on to C. In descending it would have no impulse from the earth's motion or from the cannon, and would fall in a straight line at C, but during the time it were falling, the earth, with the cannon, would have travelled on to D, and the ball would fall (allowing the world's rotation to be 600 miles per hour in England) more than two miles behind the cannon."

THE MOON.

According to current science the moon was once a piece of molten rock fractured off from the earth, when the earth was in a soft or plastic condition. Its origin is thus stated by Sir R. Ball, in the "Story of the Heavens," page 520 :

"There is the gravest reason to believe that the moon was at some very early period, fractured off from the earth, when the earth was in a soft or plastic condition. At this epoch the earth rotated 29 times on its axis, while the moon completed one circuit but whether it (the epoch) is to be reckoned in hundreds of thousands of years, in millions of years, or in tens of millions of years, *must be left in great degree to conjecture.*"

Conjecture, in this case, has to choose between hundreds of thousands and tens of millions of years. Ample scope one must admit! In the same volume, page 52, the insignificant size of the moon as compared to the stars is set forth :

"Every one of the thousands of stars that can be seen with the unaided eye, is enormously larger than our satellite."

In "Wonders of the Sun, Moon, and Stars," the same idea is announced thus :

"The luminary which appears to us next in importance to the sun is the moon, and for practical purposes, it, of course, is so ; but, considered from a broad astronomical point of view, *the moon is exceedingly insignificant, being the smallest of all the luminaries visible to us with the naked eye.* The diameter of the moon is only 2,160 miles."

The moon is said to be a reflector of the sun's light, and to have no light of her own, as the following shows. Sir R. Ball, in his "Story of the Heavens," pages 50 and 56, says :

"The brilliancy of the moon arises solely from the light of the sun which falls on the not self-luminous substance of the moon."

"The sunlight will thus pass over the earth to the moon, and the moon will be illuminated."

The speculation regarding the origin of the "lesser light that rules the night" is in keeping with the other impossible notion concerning the earth being shot off from *the sun in remote ages.* It is so purely nonsensical that it *may well be relegated to oblivion without further ado.*

As to size, the moon is next in importance to the sun, if, indeed, she is not quite as large; and many times larger than any star in the heavens, including all the planets ever seen by the eye of man.

Both the distance and size of most of the objects in the heavens may be measured with a high degree of accuracy. It only requires to be known that the object is vertical to a certain part of the world at a certain time, when the observer must take a position—which could be ascertained by previous experiment—where the angular distance of the object is 45° . A base line measured from that position to the point at which the object was vertical at the moment of observation, will be the same length as the distance of the object from the earth's surface.

Size, except in the case of very small stars, may be as easily determined. Let the instrument with which the angular distance was taken be graduated to degrees, minutes and seconds, the minutes and seconds corresponding to miles and sixtieths of miles on the earth's surface.

Having carefully adjusted the instrument, bring the image of the lower limb of the object to be measured down to the horizon, and note the reading on the instrument. Now bring the upper limb in contact with the horizon, and the difference of the reading will be the diameter of the object. It would, of course, require a very finely adjusted instrument, and one graduated to say the one hundredth part of a second to measure some of the smaller stars.

Instead of the diameter of the moon being 2,160 miles, as we are informed by the men of science of to-day, it is, by the above process, found to be about 32 nautical miles in diameter.

Then as to the moon being a non-luminous body, and receiving all its light from the sun, astronomy is as hopelessly wrong as in most other of its fanciful statements.

If the reader has taken notice of reflectors, he will have seen that they are either flat—where angles are involved—or concave, but never convex. A convex surface cannot concentrate and reflect light. But a concave surface does this, hence all reflectors, where angles are not involved, are concave. The moon is a globe. It is convex, and therefore cannot reflect light to any extent.

Then, if the moon could reflect the light, it would also reflect the heat of the sun. But we know that moonlight is cold instead of warm. In Noad's "Lectures on Chemistry," it is said :

"The light of the moon, though concentrated by the most powerful burning glass, is incapable of raising the temperature of the most delicate thermometer."

"The Lancet" says :

"The moon's rays when concentrated, actually reduce the temperature upon a thermometer more than 8°."

When light and heat are received by a reflector, light and heat are reflected, as the reader may prove for himself, by testing the matter with a petroleum lamp and a reflector.

If a red light be projected on to the surface of a reflector the reflection of it is red. In fine, reflectors reflect just what they receive.

If fish be hung up to dry in the sun, they will be preserved. But if exposed to the moon, will be rendered putrid in one night. The same applies to fruits, &c., clearly proving that the light of the moon cannot be of the same nature as that of the sun. And, furthermore, that the moon shines by its own light. The nearest approach to moonlight is phosphorescent light. And if the moon and stars be observed through a telescope, it will be noticed that starlight and moonlight, except in a few cases, are identical; the size of the star determining its brilliancy, on the principle that the larger the star the greater will its brilliancy be. "Sun, Moon, and Stars," page 57, says :

"That soft silvery light, *so unlike sunlight*, or gaslight, or any other kind of light seen upon the earth."

The theory that moonlight is only reflected sunlight requires that the illuminated part of the moon be always next the sun. Unfortunately for the theory, however, this is not the case.

If the Moon be observed from last quarter to new, it will be found that for a portion of one day, immediately before new moon, the dark part of the moon is turned towards the sun; and at new moon the sun is still to the eastward of the moon, which is illuminated on its western surface.

On 10th August, 1898, at Durban, Natal, the moon rose at 1.7 a.m., and by sunrise (6.35) was high in the heavens, showing about half on her eastern surface. On 15th, moon rose 4.58 a.m. (sunrise 6.30), with a very small portion of eastern limb illuminated, but the whole circle was distinctly visible. On 16th, moon rose 5.32 a.m. (sunrise 6.29) with the dark part towards the sun. On 17th, moon rose 6.4 a.m. (sunrise 6.28), 24 minutes before the sun. New moon same day 0.35 p.m., the moon's illuminated western limb being

turned away from the sun, which was to the eastward. On 18th, moon rose 6.36 a.m. (sunrise 6.27), and the sun was thus ahead of the moon, and on the illuminated side, having passed her between the hours of sunset on the 17th and sunrise on the 18th. Anyone who cares to take the time and make the necessary observations, may satisfy himself on this point. The almanac shows that at every new moon, the sun is to the east of the moon, which is illuminated on her western surface, clearly proving that the moon is a self-luminous body, and not a reflector of sunlight.

But how about the "phases" of the moon, if she is self-luminous? If the moon be observed it will be apparent that she rotates from west to east in order to produce the various phases, each phase appearing in spite of the position of the sun. This shows that she is luminous on half her surface, the dark half being towards us when she is invisible.

Take a wooden ball and rub half its surface with a solution of phosphorus in olive oil. Place the ball in a dark room, and cause it to rotate, and all the phases, representing those of the moon will be manifested.

It is said that the moon has been photographed and that extinct volcanoes, dry watercourses, &c., have been found on its surface. The place where seas once were, it is alleged, have not only been photographed, but named, and thus there is nothing wanting to show that the moon was once inhabited—a world like ours.

We know that "poets are licensed to lie," but astronomers who claim that their science is the most exact of any, and admits of demonstration, should be careful to speak the truth, surely. How then are photos of the moon obtained? Sir R. Ball shall tell us. In "The Story of the Heavens," note on page 62, says:

"This sketch has been copied by permission from the very beautiful view in Messrs. Nasmyth and Carpenter's book. . . . So have also the other illustrations of lunar scenery in Plates 7, 8, 9. *The photographs were obtained by Mr. Nasmyth from models carefully constructed by him to illustrate the features of the moon.*"

In the text, Sir Robert very carefully says that

"This is no doubt a somewhat imaginary sketch."

Read also the following from "Answers to Planar Questions," by W. Bathgate, M.A.:

"The author of a work called 'The Plurality of Worlds,' says: 'Take the appearance of the heavenly bodies, the moon; examine its appearance by the best constructed telescope; read

all that has been written upon it by the most skillful astronomers, and nothing remains to satisfy a mind that thinks and reasons for itself, a mind not warped by theory and fanciful hypothesis. The mountains and valleys, the seas and rivers, the fields and orchards, are all in the head of the observer. Ever since I looked at the moon through a good telescope, I have been much surprised at the credulity of the human mind in the combination of opinions raised from the appearance of this planet. These discoveries are hypothetical. You will not elicit them by applying the rules of the Baconian philosophy, or by looking through a telescope, aided by the science of geometry; BUT THEY ARE INVENTED IN THE CLOSET, BROUGHT TO THE TELESCOPE, AND THEN USHERED INTO THE WORLD AS THE CLOSE RESULT OF INDUCTIVE INVESTIGATION.'"

No, gentle reader, there are no "extinct volcanoes" on the moon; there are no "seas" on her surface. You have been badly "had" by the profession, that is all. Let photography be questioned as to the possibility of securing a correct picture of an object at a distance of 240,000 miles!

ECLIPSES OF THE MOON.

From "Wonders of the Sun, Moon, and Stars" I extract the following:

"Astronomers, by mere calculation, are able to forecast the position of any luminary at any time for many years to come. By the same means, they can foretell to a second, the commencement, duration, precise aspect, and the ending of all the eclipses that will occur for a lifetime hence, and more, without limitation. *Such being the case, the theories upon which the calculations are based must be true, or the correctness of such calculations would be impossible.*"

This statement, and similar ones so often made, have had the effect desired by their inventors. The public have believed that the theory of a globular world is true, because astronomers can correctly foretell eclipses. This is a totally erroneous view of the matter, as eclipses have no connection with the shape of the world, and are not calculated on any theory, but on well-known time cycles. In "Pagan Astronomy," by A. McInnes, the following occurs:

"More than 2,000 years ago the Chaldeans presented to Alexander the Great at Babylon, tables of eclipses for 1,993 years; and the ancient Greeks made use of the cycle of 18 years, 11 days, the interval between two consecutive eclipses of the same dimensions. The last total eclipse of the sun occurred on Jan. 22, 1879, and the preceding one on Jan. 11, 1861. Now,

have not mere theorising about the sun and moon—the great unerring clocks of time—thrown chronology and the calendar into confusion, and hence scientists cannot agree as to the world's age, and the year absurdly begins on Jan. 1 instead of at the vernal equinox, the months consisting of 31 or 30 days, one of 28? However, it can be shown that, with eclipse and star transit cycles, the greatest accuracy as to dates may be attained.

"Going back, for example, from Jan. 11, 1861, through a period of thirty-six eclipses, or 651 years, we find that a total eclipse occurred also on Jan. 11, 1210; and, continuing backwards, by such cycles we arrive precisely at the date of creation as given by Moses in Genesis. Also, as related by Josephus, the moon was eclipsed in the fifth month of 3,998 A.M., when Herod the Great died, and Christ being then two years old, His birth occurred 3,996."

In "The Triumph of Philosophy," Mr. J. Gillespie informs us as follows :

"I am asked to take into consideration how they, with the present theory, can calculate and foretell eclipses and other events with surprising accuracy. Now, I can prove that long before the present theory was ever thought of, even 600 years before Christ, the ancients discovered the difference of local time or the hour of the day between places of different longitudes, knew the causes and laws of eclipses, and the motion of the sun, moon and stars with surprising accuracy."

R. J. Morrison, F.A.S.L., R.N., in his "New Principia," says :

"Eclipses, occultations, the positions of the planets, the motions of the fixed stars, the whole of practical navigation, the grand phenomena of the course of the sun, and the return of the comets, may all and every one of them be as accurately, nay, more accurately, known without the farrago of mystery the mathematicians have adopted to throw dust in the eyes of the people, and to claim honours to which they have no just title. . . . The public generally believe that the longitudes of the heavenly bodies are calculated on the principles of Newton's laws. *Nothing could be more false.*"

T. G. Ferguson, in the *Earth Review*, for September, 1894, says :

"No doubt some will say, 'Well, how do the astronomers foretell the eclipses so accurately.' This is done by cycles. The Chinese for thousands of years have been able to predict the various solar and lunar eclipses, and do so now, in spite of their disbelief in the theories of Newton and Copernicus. Keith says, 'The cycle of the moon is said to have been discovered by Meton, an Athenian, B.C. 433,' when, of course, the globular theory was not dreamt of."

E. Breach, in his "Fifty Scientific Facts," says:

"Sir Richard Phillips in his *Million Facts*, says, 'Nothing therefore can be more impertinent than the assertion of modern writers that the accuracy of astronomical predictions arises from any modern theory.' Astronomy is strictly a science of observation, and far more indebted to the false theory of Astrology, than to the equally false and fanciful theory of any modern."

"We find that four or five thousand years ago, the mean motion of the Sun, Moon and Planets were known to a second, just as at present, and the moon's nodes, the latitudes of the planets, &c., were all adopted by Astrologers in preparing horoscopes for any time past or present. Ephemerides of the planets places, of eclipses, &c., have been published for above 600 years, and were at first nearly as precise as at present."

The same thing is admitted by Sir R. Ball, in his "Story of the Heavens." On page 56, he informs us:

"If we observe all the eclipses in a period of eighteen years, or nineteen years, then we can predict, with at least an approximation to the truth, all the future eclipses for many years. It is only necessary to recollect that in 6585½ days after one eclipse a nearly similar eclipse follows. For instance, a beautiful eclipse of the moon occurred on the 5th of December, 1881. If we count back 6585 days from that date, or, that is, 18 years and 11 days, we come to November 24th, 1863, and a similar eclipse of the moon took place then. *It was this rule which enabled the ancient astronomers to predict the occurrence of eclipses, at a time when the motions of the moon were not understood nearly so well as we now know them.*"

The foregoing extracts speak for themselves, and show clearly that the statement quoted from "Wonders of the Sun, Moon, and Stars," is entirely fallacious.

This same text book states on page 110:

"When the moon gets on the side of the earth precisely opposite the sun, the interpolation of the mass of the earth causes an eclipse of the moon."

But this statement is stripped of all its glory by the fact that lunar eclipses have taken place when both sun and moon were in full view, as Sir H. Holland informs us, and which we have before referred to.

But if there is a way to wriggle out of the logical conclusion attaching to this fact, astronomers will find it, and so we are coolly informed that refraction is the cause of the moon being visible in such a case. The moon, it is said, is really below the horizon, but refraction has cast its image *upwards and thus it can be seen.* To square the matter, it is *stated that this refraction amounts to "over 30 minutes at*

the horizon." Now, 30 minutes is about the diameter of the moon, and thus it is said that the refraction is over 30 minutes at the horizon, so that the phenomenon may be accounted for, and the moon, which is in full view, declared to be actually below the horizon. But this refraction is incapable of verification. Firstly, because refraction can only operate when the moon and the observer are in different densities, and it cannot be proved that such is the case. And, secondly, if such were the case, it could not be proved that refraction amounts to over 30 minutes at the horizon. A table of refraction before me gives it as nearly 35 minutes at the horizon, and only 3' at an angle of $17\frac{1}{2}^{\circ}$. This is so utterly impossible, that it must be rejected.

The only object of the table for the horizon seems to be to account for the phenomenon we have mentioned. But it is really too transparent, and must be cast aside as worthless and as being an endeavour to make theoretical astronomy tally with the facts. The fact that sun and moon have been seen above the horizon at a lunar eclipse, completely disproves the theory that the earth has got between the two luminaries. Refraction cannot be proved to exist, because it cannot be proved that the moon is in a greater density than the observer. And even if we "assume" the moon to be in such greater density the amount of it is entirely uncertain, and thus the theory in its entirety must be rejected.

E. Breach; in his "Fifty Scientific Facts," says:

"It is supposed that an eclipse of the moon is caused by the earth intervening between the sun and moon. The earth is reckoned to travel 1,100 miles per minute; how long would it be passing the moon, travelling herself at 180 miles per minute? Not four minutes. Yet the last eclipse of the moon, on February 28th, lasted $4\frac{1}{2}$ hours; so it could not be the earth intervening, as both luminaries were above the horizon when the eclipse commenced, and the spots of the moon could be seen distinctly through the shadow; the moon was also seen among the stars."

This is a hard nut for Newtonians to crack, and not quite so easy of accomplishment as "cracking the crust" of their globe theory.

But the battle is not won yet. There is another bug-bear to face. It is alleged by the learned that at a lunar eclipse the earth casts a shadow on the moon, by intercepting the light of the sun. The shadow, it is alleged, is circular, and as only a globe can cast a circular shadow, and as that shadow is cast by the earth, of course the earth is a globe. In fact, what better proof could any reasonable person

require? "Powerful reasoning," says the dupe. Let us see. I have already cited a case where sun and moon have been seen with the moon eclipsed, and as the earth was not between, or they both could not have been seen, the shadow said to be on the moon could not possibly have been cast by the earth. But as refraction is charged with raising the moon above the horizon, when it is said to be really beneath, and the amount of refraction made to tally with what would be required to square the matter, let us see how refraction would act in regard to a shadow. Refraction can only exist where the object and the observer are in different densities. If a shilling be put in the bottom of a glass and observed there is no refraction; but as soon as water is poured into the basin, there is refraction. Refraction casts the image of the shilling UPWARDS, but a shadow always *downwards*. If a basin be taken and put near a light, so that the shadow of the edge touches the bottom of the basin, and a rod be placed on the shadow and water be poured in, *the shadow will shorten inwards and DOWNWARDS*; but if the rod is allowed to rest in the basin and water poured in, the rod will appear to be bent UPWARDS. This places the matter beyond dispute and proves that it is out of the range of possibility that the shadow said to be on the moon could be that of the earth. Herschel admitted that there are many invisible moons in the sky, and it is just one of these that eclipses the moon, being visible as it passes over her luminous surface. But even if we admit refraction, and that to the extent seemingly required to prove that when the eclipsed moon is seen above the horizon with the sun visible, the moon is in reality below the horizon, we are still confronted with a fact which entirely annihilates every theory propounded to account for the phenomenon. Taking the astronomers' own equation of 8" to the mile, varying inversely as the square of the distance, for the curvature of the earth, where sun and moon are both seen at a lunar eclipse, the centre of the sun is said to be in a straight line with the centres of the earth and the moon, each luminary being 90° from the observer. This would give about 6,000 miles as the distance of each body from the observer. Now, what is the curvature in 6,000 miles? No less than 24,000,000 feet or 4,545 miles. Therefore, according to the astronomers own showing an observer would have to get up into space 4,545 miles before he could see both sun and moon above his horizon *at a lunar eclipse!!!* As lunar eclipses have been seen from *the surface of the earth* with sun and moon both above the

horizon at the same time, it is conclusively proved THAT THERE IS NO "CURVATURE OF THE EARTH," and, therefore, that the world is a plane, and cannot by any possibility be globular. This one proof alone demolishes for ever the fabric of astronomical imagination and popular credulity.

In *The Belfast News Letter*, there appeared the following letter :

To the Editor of the Belfast News Letter.

"Sir,—I have been requested to direct attention to the forthcoming eclipse of the moon, which will take place on the 28th instant, and have much pleasure in doing so.

"On Friday next this interesting phenomenon will take place during the ordinary observing hours of the evening, and will, no doubt, attract some attention should the weather prove favourable. The first contact of the disc of the moon with the shadow of the earth will take place at about eight minutes to six o'clock in the evening; the middle of the eclipse happening at twenty-two minutes past seven o'clock; and the last contact of the moon's disc with the earth's shadow will take place about nine o'clock p.m. The eclipse will be a partial one, but a large area of the lunar disc will be immersed in the shadow of the earth. If the diameter of the moon be taken as unity, the magnitude of the eclipse will be 0.87. The first contact of the lunar disc with the shadow may be looked for at 85° eastward from the northernmost portion of the limb of the moon; and the last contact with the shadow will take place at 30° from same starting point in a westerly direction.

"It will be interesting to those people who have recently been treated to a dissertation on the non-rotundity of the earth by a member of the so-called Zetetic Society (an association formed with the object of proving, amongst other things scarcely orthodox from an astronomical point of view, that the earth is not a sphere, but is rather a great flat plain), to watch the well-defined circular shadow which the earth will, by its interposition between the sun and moon, cast upon the disc of the latter body.—Yours truly,

W. REDFERN KELLY, F.R.A.S.

Dalriada, Malone Park, Belfast,
24th February, 1896."

In a subsequent issue of the paper the following appeared:

To the Editor of the Belfast News Letter.

"Sir,—Having come across Mr. W. Redfern Kelly's letter on the above in your issue of the 25th, it occurred to me that the writer is mistaken in thinking the Zetetic Plancist's (as they call themselves) ideas can be injured or swept away by such superficial remarks. Unfortunately for the globular side, many eclipses have taken place when the sun has been above the

observer's horizon, thus nullifying at once the generally accepted idea that it is the shadow of the intervening earth projected on the moon by the sun. Again, the moon is recorded to have been eclipsed by a triangular shadow. This, of course, makes the Newtonians' case still worse. As to the accepted idea that the foretelling of eclipses proved the truth of the Newtonian hypothesis, this must be only mentioned to be ignored, it being well known and allowed by those who have studied this branch of astronomy to be merely a matter of correct observations during a series of years to foretell the exact time of either lunar or solar eclipses for an indefinite number of years, and has nothing whatever to do with the shape of the world.

"I trust the writer of the letter in question and other champions of the Newtonian system in Belfast will see the weakness of their attack in this instance, and take counsel, so as to attack these stubborn-minded globe-smashers or planeists in a more vulnerable position. Apologising for trespassing on your valuable space, and thanking you in anticipation for inserting my letter.—I am, dear sir, yours,

March 10th.

H. H. D'ARCHY ADAMS."

The following letters, published in the *Earth Review*, in 1896, were refused insertion in the *Belfast News Letter*:

To the Editor of the Belfast News Letter.

"Sir,—In your issue of yesterday, I observe an article by Mr. Kedfern Kelly, relative to the coming lunar eclipse. In that article reference is made to the Zetetic Society and its contention, viz.:—that the earth is not globular. This, indeed, is the contention, and the Society is indebted to Mr. Kelly for the opportunity thus afforded of giving some of their views publicly, particularly in this instance with regard to eclipses. Now, the fact may be gainsaid, but cannot be logically denied, that the surface of standing water is horizontal. Water has been proved repeatedly by the Zetetic School to be flat or level, without curvature. Such being the case the earth must and does conform to that configuration with the sun and moon above the surface. With such conditions it is obvious a shadow of the earth cannot operate, both luminaries being overhead, and several instances are on record where eclipses have taken place when sun and moon have been above the horizon, the earth being out of range of both. Of course it will be argued that refraction operated in such cases, and at first this explanation may appear plausible, but on carefully examining the subject it is found to be inadequate, and those who have recourse to it cannot be aware that the refraction of an object and that of a shadow are in opposite directions. An object by refraction is bent upwards, but the shadow of any object is bent downwards, as will be seen by the following simple experiment:—Take a plain white shallow basin, and place it ten or twelve inches from a light in such a position that the shadow of the edge of the basin touches the centre of the bottom. Hold a rod vertically over and on the edge of the shadow, to denote its true position; now let water be gradually poured into the basin, and the shadow will be seen to recede or shorten inwards and downwards, but it a

rod or a spoon is allowed to rest, with its upper end toward the light, and the lower end in the bottom of the vessel, it will be seen as the water is poured in to bend *upwards*—thus proving that if refraction operated at all it would do so by elevating the moon above its true position, and throwing the earth's shadow downwards, or directly away from the moon's surface. Hence it is clear that a lunar eclipse by a shadow of the earth is not possible. It is admitted by Herschel and other astronomers that invisible bodies exist in the firmament, and such an amount of evidence on this point has accumulated as to put the matter beyond all doubt—such bodies, though invisible to the naked eye, become apparent when in a line between an observer and a luminous body like the moon, the intervention of such a body (says the celebrated Zetetic Astronomer known as "Parallax") is the direct cause of a lunar eclipse. There are instances on record showing that some other cause existed than that of the earth's shadow to produce an eclipse.

"Mr. Walker, who observed the lunar eclipse of March 19th, 1848, near Collumpton, says, 'the appearances were as usual until twenty minutes past nine, at that period, and for the space of the next hour, instead of an eclipse or shadow (umbra) of the earth being the cause of the total obscurity of the moon, the whole phase of that body became very quickly and most beautifully *illuminated*, and assumed the appearance of the glowing heat of fire from the furnace, rather tinged with a deep red, the *whole disc* of the moon being as *perfect with light* as if there had been no eclipse whatever. **THE MOON POSITIVELY GAVE GOOD LIGHT FROM ITS DISC DURING THE TOTAL ECLIPSE.**' Of course it will be asked how the phases of the moon can be accounted for on the Zetetic basis. The reply is, the moon is semi-luminous, shining with an *independent light of its own*, one side is illuminated and the other not, as it revolves, all the phases we are familiar with become apparent. That the moon is not a perfectly opaque body, but a crystallised substance, is shown from the fact that when a few hours old or even at quarter we can through the unilluminated portion see the light shining on the other side. Stars have also been observed through her surface. In conclusion (for I have already transgressed with regard to valuable space), I would observe that a system requiring for its support such a condition and such belief as that associated with the antipodian theory, must necessarily be absolutely theoretical, and consequently devoid of *any facts!*

26th February, 1896.

J. ATKINSON."

To the Editor of the Belfast News Letter.

Sir,—May I, with your kind permission, ask W. Redfern Kelly, Esq., F.R.A.S., to answer in your columns the following questions :—

- 1st.—Prove by any practical demonstration that it is "the shadow of the earth" that eclipses the moon.
- 2nd.—Why is it that the 'shadow' is not always a globular one, and not always the same size?

3rd.—As the duration of the eclipse of the moon on February 28th lasted 3 hours 8 minutes, will he kindly explain why eclipses in Ptolemy's time lasted over 4 hours?

4th.—Is it not possible that one of the 'dark bodies' which Anaxagoras said 'were lower than the moon and move between it and the earth' is the cause of lunar eclipses? If not, why not?

5th.—Will he, by a *practical experiment upon the earth's surface*, or surface of standing water anywhere in the world, give us ONE proof that the earth is 'an oblate spheroid'?

Awaiting his esteemed replies, which I trust, for the elucidation of Truth, you will allow me to reply to.—I remain, yours respectfully,

J. WILLIAMS, *Hon. Secretary.*

Universal Zetetic Society,

32, Bankside, London, S.E.

To the Editor of the Belfast News Letter.

Sir,—In your issue of Tuesday, February 25th, I noticed a letter referring Zetetics to the eclipse of the moon on the 28th of the same month, for a proof of the supposed globularity of the earth.

If the writer had first given proof that it is the shadow of the earth which falls upon the moon, there would have been some support for his contention; but he, like all astronomers, first *assumes* that it is 'the shadow of the earth,' and secondly, that nothing but a globe can cast a circular shadow! Let him clear his argument, if we can call it one, of these underlying assumptions which vitiate it, by giving some proof of his premises, then I will, with your kind permission, examine whether his conclusions necessarily follow.

I, as one of those Zetetics your correspondent refers to, did watch the eclipse as far as the cloudy state of the sky would permit, and I must state that I drew conclusions from the phenomena very different from those he would draw, and in favour of the Zetetic position.

As Mr. Kelly seems kindly disposed towards the 'so-called Zetetic Society,' and seeks to instruct them in correct astronomical principles, he will, perhaps, after giving the proofs above asked for, be good enough to instruct us on the following points:

(1) Why did the 'shadow of the earth' begin to obscure the moon's light on her eastern limit?

(2) Why did the 'shadow' not go right across the moon's disc, *i.e.*, in the same general direction, as all the bodies involved continued in the same course as they were in when the eclipse commenced?

(3) Why did the 'shadow,' after commencing to obscure the moon on her left or eastern edge, gradually disappear at the top or upper surface of the moon?

(4) If the moon's light be only reflected sunlight, why is not *all* that light cut off when the earth is supposed to come in between the sun and the moon? In other words, how is it the *moon's disc* can be dimly seen when and where the illuminating light is cut off, even to the extent of a total eclipse? And

(5) Can your correspondent give us any testimony whatever, not vitiated by astronomical hypothesis, going to prove that the earth, which ordinarily feels so stable, has any of the awful motions attributed to it?

If facts can be shown in answer to the above questions, and in favour of the popular contention, I can promise your correspondent that his efforts will not be thrown away on Zetetics, because, as far as I am acquainted with them, and as their name implies, they are honest and fearless investigators of the truth in these matters.—I am, Sir, yours respectfully,

ALBERT SMITH."

23, East Park Road, Leicester.

It is thus left on record that the columns of the *Belfast News Letter* were closed to that open and above-board discussion for which the Press should be celebrated. A "Free Press" is what is wanted, so that the public may have both sides of the matter before them and thus be able to judge for themselves. But it is mostly the other way. Letters dealing with unpopular subjects, or taking a side against the commonly-accepted "view," are often consigned to the waste-paper basket. In this connection, however, I desire to bear witness to the freedom of the Press in this Colony. Nowhere in the world, is there that liberty and freedom of thought that should characterise a free people, as is found in Natal. At least that is my opinion. And certainly I know of no other place that can boast of such impartiality in the matter of newspaper correspondence as enjoyed by the people of Durban.

I have now finished my dissertation on the theories of astronomers regarding the moon, and we have seen that, as in every other case we have considered, there is not a word of truth in the statements of the "learned" concerning the "lesser light that rules the night."

MAGNETISM.

In a work entitled "Magnetism and Deviation of the Compass," by J. Merrifield, L.L.D., F.R.A.S., 10th Edition, page 4, the statement is made that:

"When a magnet is suspended by a thread without torsion, or on a pivot so as to move freely, it will, when left to itself, rest only in a vertical plane which stands nearly North and South."

If this statement be read with an artificial globe in sight the assurance is at once conveyed to the mind that the shape

M

of the world cannot be globular. On a vessel at sea, the compass needle could not point nearly north and south on a globular surface, but would point into the sky at both ends. To point north on the equator it would dip towards the North Pole at an angle of 45° , while the south end would be the same angle above the horizon, pointing into the sky. Only on a flat surface could the statement of Dr. Merrifield be true. What we know is that the compass needle is horizontal, except in high latitudes, and there, although it dips, spins round, and does various other extraordinary things, no constant of dip can be found. It is never the same at the same latitude at different times. In fact, there is nothing yet discovered that accounts for the deviation of the compass, lateral and vertical.

In an article in the *Nineteenth Century*, 1895, by C. R. Markham, it is stated that :

" Professor Neumayer writes that without an examination and survey of the magnetic properties of the antarctic regions, it is utterly hopeless to strive with prospects of success, at the advancement of the theory of the earth's magnetism."

It is confessed that our knowledge of what is called the earth's magnetism is very scanty. The *Journal of the Society of Arts* of 20th March, 1896, says :

" Magnetical observations in the south are at present not only urgently needed for the purpose of navigation, but also for supplying a missing link in our knowledge of terrestrial magnetism."

And Lord Kelvin, speaking at Burlington House, on 30th November, 1893, stated :

" We are certainly far from having any reasonable explanation of any of the magnetic phenomena of the earth."

It is evident that the sun has something to do with magnetism, as disturbances of sun spots have often been accompanied by disturbances of magnetic needles.

The dipping needle is an instrument constructed to record the dip at various latitudes. But as this instrument does not allow of the needle moving in a lateral direction, it is useless for any determination of the deviation of the horizontal needles. It has been claimed that it proves the globular shape of the earth, by recording the dip of the *horizontal* needles. This, however, it does not, and in its *very construction* cannot do, for the reason above stated. In London, in latitude $51\frac{1}{2}$ north, the dipping needle experi-



The family that owns the New York Times were slaveholders: Goodwin

By Michael Goodwin
July 18, 2020 10:39pm



JOHANNES EISELE/APF via Getty Images

It's far worse than I thought. In addition to the many links between the family that owns the New York Times and the Civil War's Confederacy, new evidence shows that members of the extended family were slaveholders.



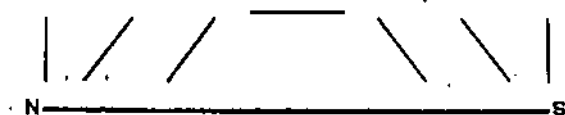
ments should show that the dip is that amount, if the theory be true. In "Magnetism," by Sir W. Snow Harris, page 163, it is recorded that :

"Sabine in 1821 determined the inclination in London by the two methods of oscillation and by Mayer's needle, and arrived at the three following results:—Mayer's needle, $70^{\circ} 2' 9''$; methods of oscillation, $70^{\circ} 4'$ and $70^{\circ} 2' 6''$."

It is evident, therefore, that we have not yet sufficient information regarding magnetism to lay down any definite rules for determining the cause and cure of deviation, whether lateral or vertical. In Harris' "Magnetism," page 254, it is stated that "Our planet is a magnet," and "that a magnetic bar is horizontal at the equator, and that in north latitude the north end of the bar dips *towards the south*, while in south latitude the south end dips *towards the north*." That is to say, in both north and south latitudes the compass points *upwards*. This is clear from the figure (127, page 254).



In "Magnetism and Electricity," by W. G. Baker, we find an illustration of the same supposed principle on page 16. Unfortunately for the exposition of Sir W. Snow Harris, the figure accompanying the text states the case to be the very reverse of that gentleman's figure.



In this figure, the bar dips *down* from the centre of the magnetic field—the equator—towards both north and south.

Both these books are standard works on the subject of "Magnetism," and yet in this, the most important of all points, they are exactly opposite!

The statement of Sir W. Harris will not bear investigation. It may be an easy way of "explaining" (which the *learned are good at*), but it does not agree with fact.

Mr. Norman H. Pollock, writing from 115, Broadway, New York, on 4th December, 1897, informs me as follows:

"Your letter of enquiry dated Nov. 2 received. I am sorry that I cannot throw much light on the subject of the 'dip' of the compass. The vessel I was on was a wooden steamer, copper fastened. With the exception of the engine, and anchors and chains, there was no iron about her. The compasses worked well until we were about 100 miles from the entrance to Hudson Straits, when they became utterly useless. We had about thirty of them, and no two pointed in the same direction. When whirled around they did not stop towards the north, but in all directions, and when they did stop the needle was depressed about 45° and usually stationary. I was on shore (nothing but rock) and did not see iron ore. The highest latitude was about 67°"

It is well known that magnetism acts in a straight line. This of itself is sufficient to prove that the earth cannot be a globe; because on a globe, wherever the magnetic influence came from, the needle would point in that direction; sometimes down through the ship's keel, and always at an angle that would render it useless to the navigator. The truth about magnetism has yet to be discovered, but even in our present state of knowledge, the weight of evidence goes to show that the world cannot be the globe of popular belief.

NAVIGATION.

It must be obvious to the reader that, if the earth be the globe of popular belief, the rules observed for navigating a vessel from one part of this globe to another, must be in conformity to its figure. The *datum line* in navigation would be an arc of a circle, and all computations would be based on the convexity of water and worked out by spherical trigonometry.

Let me preface my remarks on this important branch of our subject by stating that at sea the datum line is always a horizontal line; spherical trigonometry is never used, and not one out of one thousand shipmasters understands spherical trigonometry.

In "Modern Science and Modern Thought," by S. Laing, we are informed, on page 54, that:

"These calculations are as certain as those of the nautical almanac, based on the law of gravity WHICH
 • ENABLE SHIPS TO FIND THEIR WAY ACROSS THE
 PATHLESS OCEAN."

I have used the Nautical Almanac somewhat, but this is the first intimation I ever had that the few things it contains which are useful to the navigator, viz: Sun's Declination, Equation of Time, Semidiameter, and such-like, are "based on the law of gravity." Nor did I ever suspect that the calculations of the nautical almanac "enable ships to find their way across the pathless ocean." Such utter mis-statements may suit the unthinking man to bolster up his theory, but they declare to the complete ignorance of the critic regarding practical navigation. A knowledge of the facts compels me to jettison the cargo to lighten the ship of such absurd misrepresentations. Sun's declination is the sun's distance north or south of the equator. Semi-diameter of a heavenly body is half the diameter which has to be added to the reading if the lower limb be taken, and subtracted if the upper limb be observed, so as to get the altitude of the centre of the object. Equation of time is the difference between the real sun and the sun which the astronomer supposes to rise and set every day alike, called the mean sun. Except in taking lunars, these are all the elements required from the nautical almanac to work out an observation. In lunars the moon's parallax and right ascension are used and are given in the nautical almanac. The first of these depends on the moon's position and the second is reckoned from the first point of Aries, one of the zodiacal signs and a point in the heavens. None of these elements have anything whatever to do with the shape of the earth, and certainly none are in any way connected with the bogus "law of gravity." To a practical man, Mr. Laing's statement is both untrue and absurd.

Now let us go into the matter and see what actually is the case, and how and on what principle "ships find their way across the pathless ocean."

I shall first deal with

PLANE SAILING.

In "A Primer of Navigation," by A. T. Flagg, M.A., page 65, we find the following:

"Plane Sailing.—When a ship sails for a short distance on one course, *the earth is regarded as a plane or level surface.* The results obtained by this assumption, although not absolutely correct, are near enough in practice."

This does not look as if the "law of gravity" had a hand in the matter; neither, it must be confessed, does it appear that the Nautical Almanac has any connection with the

subject. So while the reader is reflecting on what "figure" *a globe with a plane or level surface* would "cut," we may let go the anchor for a brief space, so that A GLOBE WITH A PLANE OR LEVEL SURFACE may be duly appreciated. If the reader cannot now find time to search Euclid and other works for the nondescript figure, he may find leisure some other time. But let us get the anchor aboard and proceed.

In "Navigation and Nautical Astronomy," by J. R. Young, page 40, the author declares that :

"PLANE SAILING is usually defined to be the art of navigating a ship on the supposition that the earth is a plane. This definition is erroneous in the extreme, in all sailings the earth is regarded as what it really is, a sphere. Every case of sailing, from which the consideration of longitude is excluded, involves the principles of plane sailing; a name which merely implies that although the path of a ship is on a spherical surface, yet we may represent the length of this path by a straight line on a plane surface. . . . Even when longitude enters into consideration, it is still with the plane triangle only that we have to deal . . . but as the investigation here given in the text shows, the rules for plane sailing WOULD EQUALLY HOLD GOOD THOUGH THE SURFACE WERE A PLANE."

It must be evident to everyone who understands what a triangle is, that the base of any such figure on a globe would be an arc of a circle, of which the centre would be the centre of the globe. Thus, instead of a PLANE triangle, the figure would contain one plane angle and two spherical angles. Hence, if the PLANE TRIANGLE is what we have to deal with, and such is the case, the base of the triangle would be a straight line—the ocean. That all triangulation used at sea is *plane*, proves that the sea is a plane. The foregoing quotation states that a plane triangle is used for a spherical surface, but "*the rules for plane sailing would equally hold good though the surface were a plane.*" What fine reasoning. It is like saying that the rules for describing a circle are those used for drawing a square, *but they would equally hold good though the figure were a square.*

From Mr. Young, the mathematician, we ascend to Professor Evers, Doctor of Laws, surely he will be able to enlighten us. In his "Navigation in Theory and Practice," page 66, he tells us that :

"PLANE SAILING is sailing a ship, or making the arithmetical calculations for so doing, *on the assumption that THE EARTH IS PERFECTLY FLAT.* . . . It is not a strictly correct supposition to take any part whatever of the earth's surface as a plane; yet when the vessel goes on short voyages, the results obtained by plane sailing will be sufficiently correct to serve

every useful purpose. Plane sailing cannot always be advantageously employed, **ALTHOUGH IN PRACTICE SCARCELY ANY OTHER RULES ARE USED BUT THOSE DERIVED FROM PLANE SAILING.** *The great and serious objection to Plane Sailing is, that longitude cannot be found by it ACCURATELY, ALTHOUGH IN PRACTICE IT IS MORE FREQUENTLY FOUND BY IT THAN BY ANY OTHER METHOD.*"

This, I notice, extends the *principle* from "a short distance" by Flagg, to "short VOYAGES" by Evers. A voyage, then, may be completed by plane sailing. That is, the rules used in navigating the ship on a short voyage will be those that would "hold good though the surface were a plane." Flat surface all the way, that is it. But we are again confronted by "a globe with a plane or level surface;" clearly an impossibility. Now let us enquire how *long* the *short voyage* may be, to have "a plane surface all the way." In December, 1897, I met Captain Slocum on board the "Spray." This navigator told me that *he had sailed his little craft 33,000 miles by plane sailing.* Rather a LONG voyage, it must be admitted. A PLANE or LEVEL SURFACE for 33,000 miles, and yet the world a globe? To the pre-historic "man of science" at the North Pole, and the Darwinian Ape at the South Pole (?) of the astronomers' imaginary globe, with such a delusion.

Let it be put on lasting record that "in practice scarcely any other rules are used but those derived from plane sailing;" and that although "the great and serious objection to plane sailing is that longitude cannot be found by it accurately," yet "IN PRACTICE IT IS MORE FREQUENTLY FOUND BY IT THAN BY ANY OTHER METHOD."

The only logical conclusion we can arrive at from the principles of Plane Sailing, *as furnished by its mathematical exponents*, is that IT PROVES THE WORLD A PLANE, and we know from actual practice that such is really the case.

But before saying adieu to this navigation proof, we must quote still further.

"Bergen's Navigation and Nautical Astronomy," 1st app., page 4, states :

"If the course and distance which a ship has sailed on the globe be given, the difference of latitude and departure may be found by the resolution of a right-angled plane triangle."

We have before seen that "a right-angled-plane-triangle" on a globular surface is impossible. So there is no need to comment on Captain Bergen's statement.

In "Navigation," by D. Wilson Barker, R.N.R., F.R.S.E., and W. Allingham, Plane Sailing is dealt with on page 29 as follows:

"We may now *assume* as an axiom that the shape of the earth somewhat resembles that of an orange. At one time people thought differently, *but no sane person to-day would venture to assert that our planet is merely an extended plane.* Still we shall not be far out IF WE IMAGINE that the small portion of the earth's surface with which we are concerned in *Plane Sailing* is ACTUALLY A PLANE. Hence, in Plane Sailing, regarding the small portion of the ocean with which we have to deal AS A FLAT SURFACE LIKE A SHEET OF PAPER, we have always A RIGHT ANGLED PLANE TRIANGLE TO WORK WITH."

These learned gentlemen say that no *sane* person to-day would venture to assert that OUR PLANET is merely an extended plane; and yet they ask the reader to admit their sanity when they furnish data which prove the world to be a plane! Wonderful learning and profound philosophy that fit a plane triangle on to a spherical surface. Surely A GLOBE with a FLAT SURFACE LIKE A SHEET OF PAPER is a new figure, not found in Euclid or any of the works that deal with triangulation. We may well challenge the advocates of the globular theory to produce their globe with its plane or level surface like a sheet of paper, and be certain of their failure.

The spectre called "our planet" only requires to be planed (just a little *levelling*) to reduce its surface to a plane; and before we have finished the process the plane will be very plain indeed.

In the "Natal Mercury" of 14th March, 1898, the following example of 2,000 miles of plane sailing is furnished:

"Captain Moloney, of the "Briton," gave a representative of this journal particulars respecting the passage of the vessel through a dust storm on the way out. He said that they fell into the storm about 80 miles south of Madeira, and were in it for a distance of between 1,800 and 1,900 miles. *They were without observations for 2,000 miles . . . so that they had to go over 2,000 miles on DEAD RECKONING.*"

This terrible sand-storm visited another ship, and planed off the supposed convexity of the water, so that plane sailing could be carried out and even *longitude* found by it for a further distance of 900 miles, as witness the "Natal Mercury" of 25th February, 1898:

"The experience met with by the 'Roslin Castle' on her homeward journey was most extraordinary. A sand-storm of unprecedented density enveloped the vessel, and rendered observation impossible for 900 miles. Madeira was reached by means of DEAD RECKONING."

Plane Sailing proves that the surface of water is a plane or horizontal surface "like a sheet of paper," and in practice it is shown that this plane extends for many thousands of miles. Whether the voyage is outwards, as in the case of the "Briton"; or homewards, as in the case of the "Roslin Castle," makes no difference; thus showing that a "short voyage" to the Cape and back to England can be accomplished by plane sailing, flat water "like a sheet of paper" all the way.

The fact that water is flat like a sheet of paper (when undisturbed by wind and tide) is my "working anchor," and the powerful "ground tackle" of all those who reject the delusions of modern theoretical astronomy.

Prove water to be convex, and we will at once and forever recant and grant you anything you like to demand.

I will not waste time by quoting Mercator's, Middle Latitude, and Parallel Sailings, for they are merely plane sailing extended. Let us get on to what unthinking navigators believe to be a proof of the globularity of the world,

GREAT CIRCLE SAILING.

Bergen's "Navigation," 1st appendix, page 9, states :

"Great circle sailing is founded on the principle that the shortest distance reckoned on the earth's surface between any two points, is the arc of the great circle intercepted between them."

The "arc of a circle" has undergone considerable planing when it leaves Mr. Wilson Barker's hands, for he informs us on page 95 that :

"We may ASSUME as an axiom that the shortest distance between any two points is a STRAIGHT LINE."

What, a *straight* line on a globular surface? Never, it is impossible. When it can be obtained, we surrender.

In "Navigation," by Rev. W. T. Read, M.A., page 51, the resource that is had to approximate great circle sailing is stated to be that :

"The vessel may be said to sail UPON THE SIDES of a many-sided PLANE FIGURE."

So, after all, the earth is not a globe, but a flat-surfaced many-sided plane figure—A POLYGON!

But how long is Mr. Wilson-Barker's STRAIGHT line? When the corner of the Polygon was reached *another straight line* would have to be followed, and another on the next side, and so on. Truly, these paste-board navigators are all "at sea" and don't know whether the ship is in the water or the water in the ship.

It is somewhat remarkable that J. R. Young, who so earnestly endeavours to support the globular hypothesis in his "plane sailing," does not even mention "great circle sailing" in his work already referred to. Plane sailing is sailing on a plane and there is not the remotest chance of proving convexity from it. If there be any semblance of globularity it can only be found in what is known as great circle sailing. There is, in reality, no such thing as sailing on a great circle, or on any circle except a flat one. On a globe, all circles that do not pass through the centre are called small circles, and to sail on one of them, it is said, is on the Rhomb-line or Mercator track, and the longest distance. But on any great circle—any circle that passes through the centre of the globe—the distance is said to be the shortest. The arc of the great circle between any two places on it is the shortest distance and is the great circle track.

I have already shown that water is level, "like a sheet of paper," as one author puts it. It is, therefore, quite impossible to sail a vessel on the globular arc of a circle, which is said to be done in following a great circle track. But Bergen's "Navigation" will help us. Page 247 of this work states that the great circle track may be found on a great circle chart by laying a *straight edge* on the ship's position and that of her destination, "the edge shows the track."

We simply ask for the globe that will bear the application of the straight edge. If it be argued that the great circle chart is merely a device for reducing the globular surface of the earth to a plane surface for the sake of simplicity, and that a curved surface can be represented by a straight line, we say it is impossible to represent a curved surface by a straight line and absurd to make the attempt, and we have already shown that water is flat, "like a sheet of paper"; we are, therefore, fully entitled to conclude that Captain Bergen's *straight edge* is applicable to a *straight surface only*. That this is what is really the case will appear later.

Rhomb-line sailing, which was mostly practised under certain conditions before Great Circle sailing was "discovered," is sailing the longest way round. The difference between the methods will be seen in the following :—Describe a circle, and mark any two places on it, say A and B. Let the circle be 12 miles in circumference, and A and B 3 miles apart. It is evident that if the rhomb-line from A to B be followed, the distance sailed will be 3 miles; but draw a straight line from A to B, and it will at once be seen that by following this track the distance will be shortened to $2\frac{1}{4}$ miles. *This straight line is the great circle track between A and B.* Or, if a piece of thread be drawn across a globe between any two places, the track thus obtained will be part of a great circle, and if this be transferred to a Great Circle chart IT WILL BE A STRAIGHT LINE. Therefore I conclude that great circle sailing is no discovery, for, had those who "discovered" it only perceived that the earth is a plane, they would have known that, on a plane surface, the shortest way is a straight line between two places.

Rhumb-line sailing between any two places on the same parallel of latitude, would be sailing the ship east or west (as the case might be), *thus making a circular path*; whereas the great circle track would either be to the north or south of east or west, so as to get a straight line between the two places, which would be the shortest distance. It is surprising that anyone has claimed this as a discovery, and still more surprising to find anyone with a knowledge of navigation writing it down as proof of the earth's rotundity. THE GREAT CIRCLE TRACK ON A GLOBE ANSWERS TO A STRAIGHT LINE ON A PLANE SURFACE. THE EARTH'S SURFACE IS A PLANE SURFACE, THEREFORE IT IS NO DISCOVERY TO FIND THE SHORTEST CUT TO BE THE MOST DIRECT ROUTE ON THAT SURFACE.

Thus, great circle sailing, which is in reality rectilinear sailing, shows that the *chord* of the arc is a shorter distance than the arc, inasmuch as a *straight* line is shorter than a *roundabout* one can be. Let it be noted, however, that great circle courses are seldom followed on account of land and other impediments being in the way. Now we return to "Evers' Navigation." On page 192 we get his idea of great circle sailing as follows:

"The solution of problems in great circle sailing depends upon spherical trigonometry; hence to rightly comprehend the whole subject, the student must be well versed in the solution of right angled and oblique spherical triangles."

When a Professor of Navigation says that spherical trigonometry is necessary to the practice of great circle sailing, of course the general reader believes the statement. But there is no truth in the statement all the same. I have already stated that spherical trigonometry is never used at sea, and that few navigators understand the subject. But there are few navigators who hold Board of Trade certificates that could not calculate the first and other great circle courses, the position of the vertex and the last course on a great circle track in a few minutes. How then can it be done by spherical trigonometry, if the calculators do not understand it? The answer is that it is done in every case by *plane* trigonometry. If the reader will procure a work on spherical trigonometry and one on plane trigonometry, he will see that the sines, co-sines, tangents, secants, &c., in relation to *the chord of an arc on a flat surface, are precisely the same as these quantities when taken in relation to the arc of a globular circle.* In Evers' "Navigation," pages 227 and 228, the "limitations of great circle sailing" are dealt with as follows:

"The difficulty in making the calculations for great circle sailing are sufficient to deter the majority of practical men from adopting it. Again, as before intimated, many impediments, as islands, land, too high a latitude, &c., lies in its way. Several modifications to further extend its use, and mechanical methods already referred to, have been introduced. Theory and practice in this case are often widely separated. The sailing master has to take advantage of winds and currents, and considers how he shall make the *quickest passage*, which is not always the *shortest*. The best way to find out where the quickest passage can be made, is to lay down the great circle on a Mercator's chart, which has the winds and currents marked on it; then with the straight line on the chart joining the two places, first compare the two paths, *i.e.*, the Mercator's and great circle tracks, taking note of what currents of wind or water will assist the vessel; whichever offers the quickest passage is the best route, if not the shortest. Again, if by modifying the great circle track, by keeping to a lower latitude, the ship can be brought into currents in favour of the vessel, that will be the best track. Although the greatest advantages of great circle sailing over the rhumb are obtained when sailing in high latitudes, yet, in consequence of the danger arising from ice and icebergs floating from the North Pole into the North Atlantic, and from the South Pole into the South Pacific and South Atlantic, navigators are unable to secure these advantages."

From page 193, Vol. I., of "Naval Science," we extract the following :

"In the passage from Panama to Australia, the rhumb track would entangle us in the Low Archipelago, in Dangerous Archipelago, and carry us into the very focus of coral reefs, atolls, lagoon islands, and sunken rocks, while the great circle route would take us clear of these dangers. On the other hand, the great circle track from Cape Horn to Cape of Good Hope (were there no other objections), would run the ship on one of the Sandwich group, while the rhumb course would carry her clear of such dangers."

In practice, therefore, it is clear that the advantages of what is known as great circle sailing, can seldom be secured, for the above reasons.

But if a vessel starts on a great circle course and sails on it one day, how is her position found? By plane triangulation only, and in every case, as I shall now proceed to show. The following example of "finding the latitude" from a meridian altitude of the sun is taken from Bergen's "Navigation," page 67 :

EXAMPLE.

1. 1865, March 4th, in longitude $4^{\circ} 30'$ E., the observed meridian altitude of the sun's lower limb was $24^{\circ} 49' 10''$, bearing south, index error $-9' 50''$, height of eye 11 feet; required the latitude.

	d.	h.	m.	s.		°	'
Apparent time at ship, March ...	4	0	0	0	Longitude ...	4	30 E.
Longitude in time, East ...	-	0	18	0			4
Apparent time at Greenwich,)						60)	18 0
March... ..)	3	23	42	0	Long. in time	0	18 0
Hours and decimals of hours ...			23	7			
						°	'
Sun's declination at noon,)					Diff. for one hour		57.55
March 3rd)	6	41	28	S.—	Hours, &c. ...		23.7
Correction	-	22	44				
Sun's reduced declination ...	6	18	44	S.			40,285
							17,265
							11,510
						6,0)	136,3935
					Correction ...		22.44

Observed altitude, sun's lower limb	24 49 10 S.
Index error... ..	— 9 50
<hr/>	
Dip., Table V., for 11 feet	24 39 20
	— 3 16
<hr/>	
Apparent altitude, sun's lower limb	24 36 4
Sun's corr., Table VII.	— 1 57
<hr/>	
Sun's semi-diameter, page 11., Naut. Almanac	24 34 7
	+ 16 10 or Table VIII.
<hr/>	
True altitude, sun's centre	24 50 17
	90 0 0
<hr/>	
Sun's zenith distance	65 9 43 N.
Declination... ..	6 18 44 S.
<hr/>	
Latitude	58 50 59 N.

The sextant, or quadrant, is an instrument used to measure the altitude of any object above the surface of the earth. The former will measure angles up to 120° . The latter instrument only measures up to 90° —hence a quadrant. Except in taking a lunar, where two heavenly bodies are at a greater angular distance than 90° , the quadrant will do as well as the sextant.

Having previously adjusted the instrument, with the sextant bring down the image of the sun to the horizon at noon, and note the reading. In the example before us, the instrument had an error, which is allowed for. If the observer's eye were at water-level, there would be nothing to deduct for "height of eye" (erroneously styled "dip"). But as the eye is always above the water, and *consequently a greater angle* is obtained, an amount must be deducted to give *the reading that would have been obtained with the eye at water level*, that being the datum line. Therefore, "height of eye" must be deducted.

With the eye at water level at one angle and the sun at water level at the other, the line joining them is the base of the triangle—a straight line, of which we have already heard so much. But if water be convex, when the height of eye is deducted and the observation reduced to the datum line—the sea, then the eye and the sun are both at the surface of the convex water, consequently the base of the *triangle is the arc of the circle between the two points*, and *another allowance* must be made to reduce this arc of a

circle to a straight line, in order to determine the true angle of the plane triangle. That this is not only never done, but that no work on Navigation ever published makes the slightest reference to the need for such a correction, and that all triangulation in Navigation is *plane*, proves incontestably that the surface of the ocean is a plane surface.

Having deducted height of eye, deduct the refraction (which raises the image of an object above its true position) if any exists, and the result is the true altitude. Then, if the lower limb of the sun be observed, add half the diameter so as to get the true altitude of sun's centre. Then a further fact requires to be noticed. The sun, when on the equator, that is, when it has no declination, makes a right angle with the ocean and land at all points on the equator. This fact and horizontal water are the main data in observations for finding the ship's position at sea. Deduct what has now been arrived at from the right angle (90°), the remainder is the sun's zenith distance. Then, if the sun had no declination, the zenith distance would be the latitude; but as the sun in the present case is *south* of the equator and the ship in *north* latitude, the declination (sun's distance from the equator) has to be subtracted to give the latitude. The declination, I may notice, is the reduced declination. That is, the declination reduced to the longitude of the ship. As the sun only makes a perfectly circular path about four times in a year, his path being eccentric at all other times; it is required to know the variation of the declination, the eccentric above referred to being a spiral or corkscrew movement. If at Greenwich the declination is a given amount, and the variation for one hour be known, we only require to know how many hours the ship is east or west of Greenwich to know by how much to multiply the variation, to get the amount to be added if declination be increasing; or subtracted if it be decreasing.

Much time could be saved by the use of an instrument pivoted vertically and supported by four legs with gimbals and weighted with lead to preserve the instrument vertical; with a sight to take the angle of the sun, that is, its difference from the vertical (90°), which, with the declination applied, would give the latitude in a few minutes. In all these quantities there is not the remotest reference to the rotundity of the earth, but the very opposite, as the datum line—flat water, is one of the main factors.

In finding the longitude also, the same method of triangulation is used. If the surface of the ocean be globular, *there are no rules laid down for calculating on that basis.*

The allowance for convexity is never made, and it would be impossible to allow for it, as in clear weather the horizon is distant, while in thick weather it is very near. To reduce the curved base of a spherical triangle to a straight line of a plane triangle is an impossibility, because the factors are unknown and in the nature of the case, never can be known.

The whole of navigation, therefore, furnishes strong evidence that the world is not the globe of astronomical speculation and popular credulity, but a plane figure.

The base of the triangle is always the straight line projected from the observer; and a straight line requires a flat or horizontal surface for its projection.

It is commonly supposed that meridians of longitude south of the equator, converge to a common centre, as they do in north latitudes. If this were so, the allowances to be made for the longitudes being shorter as the south was approached would show the ship to be in her true position.

Captain Woodside, of the American barkentine *Echo*, at Capetown, in June, 1898, says that on 12th January, 1896, being without observation for two days and sailing a straight course at 250 miles a day, he expected to be about 100 miles to the southward, and a long way to the eastward of Gough Island, in latitude 40° south; but was startled to find the ship making straight for the island, and barely escaped shipwreck. This proves that although the usual allowance for shorter longitudes in the south had been made, the ship's position was not known. There must, therefore, be something wrong with the assumed length of degrees of longitude in the south. In the case above referred to, the ship was going to the eastward, and had an allowance in excess of the usual length of a degree of longitude been made, so as to correspond to what the length of degrees are at 40° south latitude, the ship's longitude would have been known. That it was not known proves that degrees are longer at 40° south latitude than at the same latitude north of the equator.

In "South Sea Voyages," by Sir James C. Ross, page 37, it is stated:

"By our observations at noon we found ourselves 58 miles to the *eastward* of our reckoning in two days."

And in a "Voyage towards the South Pole," by Captain James Weddell, we find the following:

"At noon in latitude $65^{\circ} 53'$ South our chronometers gave 44 miles more *westing* than the log in three days."

Lieutenant Wilkes informs us that :

"In less than 18 hours he was 20 miles to the east of his reckoning in latitude $54^{\circ} 20'$ South."

The discrepancies in the above cases were attributed to currents, *whether the course of the ship was westerly or easterly*, which could not possibly be the case. These navigators, believing the world to be globular could not imagine any other way of accounting for the discrepancies between longitude by "dead reckoning," making allowance for the supposed shorter longitudes, and that obtained by observation. The explanation is that the world diverges as the south is approached, instead of converging, as the theory teaches.

It has also been shown under "Distances" page 31 of this work, that at latitude 32° south, the distance round the world is about 23,000 statute miles; at latitude $35\frac{1}{2}^{\circ}$ south, the distance round is over 25,000 miles; and still further south, at latitude $37\frac{1}{2}^{\circ}$ south, the distance is 25,500 miles, about. These distances, obtained from ship's logs, cannot be disputed; and are altogether against the theory of the earth's rotundity. By purely practical data, apart from any theory, it is shown that the world diverges to the south, and that, therefore, it cannot be a globe.

THE PENDULUM.

Sir Robert Ball, in his "Story of the Heavens, page 177, says :

"We find that by observing the swing of a Pendulum at different parts of the earth, we are enabled to determine the shape of our globe."

This is perhaps one of the greatest fallacies of the globular school, and when looked at without prejudice, is sheer nonsense. A Vibrating Pendulum on a globe with various movements would move with the globe, and could not by any possibility record the movement of the globe to which its supports were fastened.

The following is from "Noad's Lectures on Chemistry," page 41 :

"All the solid bodies with which we are surrounded are constantly undergoing changes of bulk, corresponding to the variations of temperature. . . . The expansion and contrac-

tion of metals by heat and cold form subjects of serious and careful attention to chronometer makers, as will appear by the following statements:—The length of the pendulum vibrating seconds, *in vacuo*, in the latitude of London ($50^{\circ} 31' 8''$ north) at the level of the sea, and at the temperature of 62° Fahr. has been ascertained with the greatest precision to be $39\cdot13929$ inches. Now, as the metal of which it is composed is *constantly* subject to variations of temperature it cannot but happen that its *length* is constantly varying, and when it is further stated that if the 'bob' be let down $1\cdot100$ of an inch, the clock will lose ten seconds in twenty-four hours; that the elongation of $1\cdot1000$ of an inch will cause it to loose one second per day; and that a change of temperature equal to 30° Fahr. will alter its length $1\cdot5000$ part, and occasion an error in the rate of going of eight seconds per day, it will appear evident that some plan must be devised for obviating so serious an inconvenience."

In the "Figure of the Earth," by J. Von Gumpach, we are informed as follows:

"General Sabine himself," relates Captain Foster, "was furnished with two invariable pendulums of precisely the same form and construction as those which had been employed by Captain Kater and myself. Both pendulums were vibrated at all the stations, but FROM SOME CAUSE, which Mr. Bailey was UNABLE TO EXPLAIN, the observations with one of them were SO DISCORDANT at South Shetland as to REQUIRE THEIR REJECTION."

The *English Mechanic* of 23rd October, 1896, has the following, signed by a fellow of the Royal Astronomical Society:

"In reply to 'Foucault's Pendulum' (Query 89,090, p. 192), the plane of oscillation of the pendulum in latitude 5° would rotate in a retrograde direction at the rate of only $1\cdot307336''$ per hour; in other words, it would take $11\cdot4737$ days, or about $11\frac{1}{4}$ days, to complete its rotation. Hence, while it might *theoretically* be employed to show the earth's rotation, IN PRACTICE IT MUST FAIL TO DO SO."

"Iconoclast," writing in the *Earth Review*, for April-June, 1897, says (*inter alia*):

"The so-called pendulum proof of the world's assumed rotation was obliged to be renounced years ago as worthless, by those who were in the best possible position to judge, as these few of numerous extracts show: 'The first position of these theorists is, that in a complete vacuum, beyond the sphere of the earth's atmosphere, a pendulum will continue to oscillate in one and the same original plane. On that *supposition* their *whole theory is founded*. In making this supposition the fact is overlooked that there is *no vibratory motion* unless through atmospheric resistance, or by force opposing impulse. Perpetual progress in rectilinear motion may be imagined, as in the corpuscular theory of light; circular motion may be also found

in the planetary systems; and parabolic and hyperbolic motions in those of comets; but vibration is artificial and of limited duration. No body in nature returns the same road it went, unless artificially constrained to do so. The supposition of a permanent vibratory motion, such as is presumed in the theory advanced is *unfounded in fact* and absurd in idea; and the whole affair of this proclaimed discovery falls to the ground."

"T."

"Liverpool Mercury," May 23rd.

Again, in the same month, appears the following:

"A scientific gentleman in Dundee recently tried the pendulum experiment, and concludes by saying, 'That the pendulum is capable of showing the earth's motion, I regard as a gross delusion. . . .'"

Again, another asserts. "He and others had made many pendulum experiments, and had discovered that the plane of vibration had nothing whatever to do with the meridian longitude, nor with the earth's motion. . . ."

In many instances experiments have however not even shown a change in the plane of oscillation of the pendulum; in others the alteration has been in the wrong direction; in fact, in numerous instances, the rates and directions have been altogether opposite to that which the theory indicated; a notable illustration of this was given publicly by the Rev. H. H. Jones, F.R.A.S., in 1851, at the Library Hall of the Manchester Athenæum, where the diurnal rotation of the earth was to be attempted to be demonstrated by a delicately adjusted Pendulum; after giving, at length, a minute description of the arrangements and apparatus, we come to the admission, that the pendulum, on being released, travelled over a measured space in *seven minutes*, whereas, according to the theory, it ought to have taken fifteen minutes, or more, to accomplish the distance; and remember, this great difference was made without any allowance being made for the resistance of the air, which would be considerable. Anyone can verify this account by referring to the "Manchester Examiner Supplement" of May 24th, 1851.

By referring to "The Figure of the Earth," by J. Von Gumpach, 2nd edit., 1862, on pp. 229 to 244, results will be seen of Sixty-seven experiments with the Pendulum, made in every latitude North and Twenty-nine South of the Equator, by Captains Foster and Kayter, and General Sabine, all of which are admitted to be absolutely worthless for proving anything regarding the *assumed* motion of The World through space.

If such testimony is not enough to make Pendulum-proof worshippers *think*, they must either be as bigoted as it is possible to conceive, or as thick in the cranium as their globe."

The vibrations of a pendulum, therefore, whatever value they may have in determining something as yet unknown, can have nothing to do with the supposed motions of the earth, and must be relinquished by every thinking man.

PLURALITY OF WORLDS.

Sir David Brewster, in his "More Worlds than One," says :

"It was not till the form and size and motions of the earth were known and till the condition of the other planets was found to be the same, that *analogy compelled us to believe that THESE PLANETS MUST BE INHABITED LIKE OUR OWN...*"
 "The doctrine was maintained by almost all the distinguished astronomers and writers who have flourished SINCE THE TRUE FIGURE OF THE EARTH WAS DETERMINED"
 "Under these circumstances the scientific world has been greatly surprised at the appearance of a work entitled 'Of a Plurality of Worlds', the object of which, like that of Maxwell, is to prove that our earth is the only inhabited world in the universe, while its direct tendency is to ridicule and bring into contempt the grand discoveries in sidereal astronomy by which the last century has been distinguished."

In "Sun, Moon, and Stars," by A. Giberne, page 10, the following is found :

"Just as our sun is a star, and stars are suns, so our earth or world is a planet, and planets are worlds." "The planets are worlds, more or less like the world we live in."

And in his "History of the Conflict between Religion and Science," Dr. Draper tells us that :

"If each of the countless myriads of stars was a sun surrounded by revolving globes, peopled with responsible beings like ourselves; if we had fallen so easily and had been redeemed at so stupendous a price as the death of the Son of God, how was it with them? Of them were there none who had fallen or might fall like us? Where, then, for them, could a Saviour be found?"

IF the world be the globe of popular belief; IF the sun be a million and a half times the size of the earth-globe and about 100,000,000 miles distant from it; IF the stars are worlds and suns, distant many millions of miles and vastly larger than even our own sun; IF the earth was a piece of molten rock shot off from the sun; IF the moon was a piece fractured off from the earth; THEN it is a very proper question to ask, "Are these mighty globes in space inhabited?" If so, are their inhabitants of a higher or lower order than the inhabitants of this globe?

Sir D. Brewster says that the plurality of worlds rests upon a few simple facts, and the foregoing are said to be some of these facts; but it was not till the form and size and *motions of the earth* were known that ANALOGY compelled the belief that the planets must be inhabited worlds like ours.

I have already shown that those who believe modern astronomy, and, by consequence, the plurality of worlds, are of all men most ignorant as to the shape of the world they live on; that it has none of the terrific notions 'attributed' to it; and that, unlike celestial bodies, it is a terrestrial structure, a stationary plane.

The following quotation from "A Treatise on Astronomy," by E. Henderson, L.L.D., F.R.A.S., shows that the whole of this supposed analogy is based upon conjectures, and must therefore be rejected.

"The great *probability* is that every star is a SUN far surpassing ours in magnitude and splendour; they all shine by their own native light. . . . What a most powerful SUN that little star Vega must be, when it is 53,977 times larger than our sun. . . . The stars thus being SUPPOSED to be suns it is EXTREMELY PROBABLE that they are the centres of *other systems of worlds*, round which may revolve a numerous retinue of planets and satellites. *Therefore, there must be a plurality of suns, A PLURALITY OF WORLDS.*"

The plurality of worlds, therefore, is based on assumptions so contrary to known possibilities, that the "grand idea" must be thrown into the waste-paper basket.

The supposed great distance of the sun from the earth is the main cause of the delusions of the learned as to the so-called worlds above us being inhabited.

This distance is based on a fictitious idea, that of the revolution of the earth round the sun; which I have already shown to be unconditionally false. The sun is a small body of light and near the earth, therefore all the star distances are wrong, their sizes and all other suppositions.

The plurality of worlds is only the logical sequence of belief in the earth being a rapidly revolving globe. But this has been shown to be ridiculous in the extreme. Evidence, apart from any theory has been presented which entirely nullifies such an assumption, and renders it absurd; showing that such an unnatural idea has not a vestige of natural fact to support it. The grand doctrine of the plurality of worlds, therefore, like all the other grand doctrines of modern astronomy, must be consigned to oblivion. When it can be shown that this world is a globe and by what known principle the inhabitants can hang on to the swinging ball, like the house fly crawls along the ceiling, it will be quite time enough to talk about the plurality of worlds.

THE PLANETS.

If all that astronomers have to say about themselves were correct, they would be about the wisest as well as the cleverest man that ever existed. There are not many modest men among them, but the quotation which follows is about the most *modest* that can well be found. It is taken from "The Story of the Heavens," from which we have quoted frequently.

"Astronomers have taken an inventory of each of the Planets. They have measured their distances, the shapes of their orbits, and the positions of these orbits, their times of revolution, and in the case of all the large planets their sizes and THEIR WEIGHTS." . . . "It is not even an easy matter to weigh the earth on which we stand. How, then, can we weigh a mighty planet vastly larger than the earth, and distant from us by some hundreds of millions of miles. Truly this is a bold problem. Yet the intellectual resources of man have proved sufficient to achieve this feat of celestial engineering. . . . ALL SUCH INVESTIGATIONS ARE BASED ON UNIVERSAL GRAVITATION." "A foot-rule placed at a distance of 40 miles subtends an angle of a second, and it is surely a delicate achievement to measure the place of a planet and feel confident that no error greater than this can have intruded into our result."

The uninitiated reader may gape with wonder when contending these and such-like absurdities, but we shall presently show how great the errors are, which have intruded into the calculations of the wise men. But first, as to the basis of the whole of those supposed achievements of scientific celestial engineers, IT IS SAID TO BE FOUNDED ON UNIVERSAL GRAVITATION, which we have proved to be like most other statements of the wise men, A MYTH.

Now as to the small errors. "Our Place among Infinities," by R. A. Proctor, page 100 informs us that:

"If the error of the sun's distance appears startling, what will be thought of an error which must be admitted by millions of millions of miles? If the measure of the sun's distance is 100,000,000 miles, the distance of Sirius would amount to about four hundred millions of miles, THE CALCULATED DISTANCE of Sirius is an error involving 50 millions of millions of miles."

They would murder the very great men of science who have been so long at their astronomical tables. What do we think of that? Or a man think at all, he must think that this was some great wonder, as all about the stars and planets of the heavens, which were of necessity be known that we might make the earth a better place.

that is heavier than air does. When such errors are unblushingly admitted and the figures based on the law of gravitation, the results arrived at must be as mythical as we have seen the law of gravitation to be.

T. G. Ferguson, in the *Earth Review* for September, 1894, says:

"Let us now glance at their theories about the Planets. . . . Saturn's mean distance from the sun, as given in the 'Story of the Heavens,' is 884,000,000 miles, and the diameter 71,000 miles. Professor Lockyer gives its distance as 890,000,000 miles; a difference of 4,000,000 miles. Professor Olmstead gives Saturn's distance from the sun as 890,000,000 miles, and the diameter 79,000 miles. Others could be quoted equally at variance. WHERE, WE ASK, IS THE ACCURACY OF THIS 'MOST EXACT OF SCIENCES.'"

Were it necessary we could fill a good many pages with the errors of this exact science; enough has been said to prove to the thinking man that the wise men we have quoted know no more about the planets, their sizes, weights, and distances than did Hodge when, after having listened to a very learned discourse about the starry heavens, he was asked what he thought of the marvellous fact that light had taken from creation to travel from some of the fixed stars to the earth, he exclaimed, "*Luv, Sir, what a big lie it do be, to be sure.*"

ON PARALLEL LINES.

The term "parallel" signifies equidistant, hence the self-evident truth that "parallel lines never meet." Because they are at equal distance from each other, they can never meet, no matter how far they may be prolonged. If lines do meet when prolonged, it is because they are not parallel or equidistant from each other. The above is so well-known that it seems at first sight a waste of words to re-state it, but the following quotations will show the necessity of emphasizing even self-evident truths.

"Some Unrecognised Laws of Nature," by I. Singer and L. H. Berens, page 11, contains the following:

"We suspend two plumb lines at a convenient distance and then measure their distances from each other at both ends. The most delicate measurement at present possible would demonstrate—as far as this is possible by direct observation—that the two

The Way to the Top



The Best Business
Advice I Ever Received

Four people have given me sound nuggets of wisdom that have helped me keep business in perspective.

When I was nineteen, I complained to David Geffen about some other people in the entertainment business who were making a lot of money and who I didn't think deserved it. David turned to me and said, "You need to

be a racehorse. Do you know what

racehorses do?" I answered, "They

race." David replied, "No, they wear

blinders! If they looked to the left

or right, they would lose. Don't look

to the left and don't look to the right. Wear blinders and race your own race!"

One day, when my Kabbalah teacher, Eitan Yardeni, asked how I was doing, I told him I needed a break. I was thoroughly exhausted, overwhelmed, and overworked. Eitan then said, "Do you know what you should do now?" I thought he was going to encourage me to take some time off. But instead he replied, "No, go work harder! Be careful what you ask for because you may get it." Eitan was right. If I ask for a break, God may

*Never lose
perspective*



Microsoft



"So you see kids, there's this Worldwide Jewish Cult among us who are financially enslaving everyone by controlling the money supply and starting wars to



FUCK
YOU
JEWS



create a One World Government. These psychotic little Jew bastards are planning to rule as gods over all the non Jews. We have to stop these maniacal fucktards before it too late".

lines are parallel to each other. By the aid of the abstract axiom that parallel lines if extended indefinitely would never meet, we would draw the inevitable inference that two such plumb lines, if indefinitely extended would never meet. This conclusion would seem obvious and inevitable; yet the student of to-day knows it to be false. But his knowledge is not due to *direct* observation, but to his acquaintance with the fact that the earth is round, and that plumb lines at any part of the earth are at right angles to the horizon."

I have not read one work on Astronomy which does not require on enormous amount of credulity if the reader is to accept as truth whatever is presented to him, but the above quotation will equal anything anywhere for the amount of credulity it pre-supposes the reader to be possessed of. By direct observation and experiment it is proved that parallel lines can never meet, being equidistant from each other. Yet the student after having proved the truth of the proposition, knows it to be false!!! Parallel lines can never meet, because they are parallel, no matter what the figure of the world may be. The same work, on page 13, states:

"To the man who conceived the earth as a flat expanse nothing could be more conclusive than that plumb lines were strictly parallel But notwithstanding such direct and positive evidence, the student of to-day disbelieves this conclusion, and that not because he has any direct evidence to the contrary, but because it conflicts with the now established fact that our earth is a sphere. His evidence is not due to direct observation, but is circumstantial depending on a concatenation of inferences."

It would be difficult to conceive anything more opposed to reason and common-sense than the foregoing. One fact is done to death by what is said to be another fact, which is manifestly impossible, and one marvels how educated men can lend themselves to support what their own experiment condemns. The same work, continuing on page 15, says:

"The reason why 'parallel lines never meet' is because we conceive them so and because as soon as lines approach towards each other we no longer call them parallel."

"This conclusion will enable us to understand why of two such conclusions—as: (1) plumb lines are parallel; (2) plumb lines are convergent,—we accept the latter, though based on a long chain of inferences, as against the former which is the result of actual observation."

Now, the most amateur draughtsman knows that parallel lines are not parallel, "because we conceive them so," but *because they are equidistant from each other, and, therefore, can never meet if extended indefinitely.* So that the gift

authors of the work from which I quote have actually to mentally destroy a fact and to deny self-evident truth in order to support what depends on a "concatenation of inferences." The "long chain of inferences" has to be accepted as truth as against the result of actual observation! If plumb lines are parallel, how can they be convergent? Truly, this globe theory depends for its support on the stultification of common-sense, the free run of the imagination and the dethronement of the reasoning powers. According to the globular hypothesis, parallel perpendiculars are impossible, yet any builder will admit that a house is a mass of parallel perpendiculars.

"Mensuration," by T. Baker, C.E., page 1, gives the definition of parallel lines as :

"Parallel lines are always at the same distance, and never meet when prolonged."

The authors of "Some Unrecognised Laws of Nature" have gone to strange lengths to support the fiction of a globe world. It never occurred to them that their experiment proving plumb lines to be parallel, proved also that the world is not a sphere but a plane!

RAILWAYS.

In projecting railways on a globe, the datum line would be the arc of a circle corresponding to the latitude of the place. That the datum line for railway projections is always a horizontal line, proves that the general configuration of the world is horizontal. To support the globe theory, the gentlemen of the observatories should call upon the surveyor to prove that he allows the necessary amount for "curvature." But this is what the learned men dare not do, as it is well-known that the allowance for the supposed curvature is never made. In the session of the British Parliament for 1862, Order No. 44 states :

"That the section be drawn to the same HORIZONTAL scale as the plan, and to a vertical scale of not less than one inch to every one hundred feet, and shall show the surface of the ground marked on the plan, the intended level of the proposed work, the height of every embankment, and the depth of every cutting, and a DATUM HORIZONTAL LINE which shall be the same throughout the whole length of the work . . ."

In the *Birmingham Weekly Mercury*, of 15th February, 1890, "Surveyor" writes as follows :

" 'An Engineer of thirty years standing' wrote to a Magazine in 1874 quoting the following sentence as the result of his experience in the construction of railways, more especially:— 'I am thoroughly acquainted with the theory and practice of civil engineering. However bigoted some of our professors may be in the theory of surveying according to the prescribed rules, yet it is well known amongst us that such theoretical measurements are *incapable of any practical illustration*. All our locomotives are designed to run on what may be regarded as TRUE LEVELS or FLATS. There are, of course, partial inclines or gradients here and there, but they are always accurately defined and *must be carefully traversed*. But anything approaching to eight inches in the mile, increasing as the square of the distance, COULD NOT BE WORKED BY ANY ENGINE THAT WAS EVER YET CONSTRUCTED. Taking one station with another all over England and Scotland, *it may be stated that all the platforms are ON THE SAME RELATIVE LEVEL*. The distance between the Eastern and Western coasts of England may be set down as 300 miles. If the prescribed curvature was indeed as represented, the central stations at Rugby or Warwick ought to be close upon three miles higher than a chord drawn from the two extremities. If such was the case there is not a driver or stoker within the Kingdom that would be found to take charge of the train We can only laugh at those of your readers who seriously give us credit for such venturesome exploits, as running trains round spherical curves. Horizontal curves on levels are dangerous enough, vertical curves would be a thousand times worse, and with our rolling stock constructed as at present physically impossible. *There are several other reasons why such locomotion on iron rails would be AS IMPRACTICABLE AS CARRYING THE TRAINS THROUGH THE AIR.*"

This important evidence by a practical man, may be supplemented by the following from W. Winckler, M.I.C.E., in the *Earth Review* for October, 1893 :

"As an engineer of many years standing, I say that this absurd allowance is only permitted in school books. No engineer would dream of allowing anything of the kind. I have projected many miles of railways and many more of canals and the allowance has not even been thought of, much less allowed for. This allowance for curvature means this—that it is 8" for the first mile of a canal, and increasing at the ratio by the square of the distance in miles; thus a small navigable canal for boats, say 30 miles long, will have, by the above rule an allowance for curvature of 600 feet. Think of that and *then please credit engineers as not being quite such fools*. Nothing of the sort is allowed. I must, however, state that college astronomers have made the student engineer to think that in his method of levelling what is known as the "backsight" cancels any curvature by his "foresight", and so on. It is only a theory, and if astronomers declare that our method of levelling cancels the obligation of making this

allowance, we sha'nt quarrel with them—it does no damage to our projects when we get into practice, *but we no more think of allowing 600 feet for a line of 30 miles of railway or canal, than of wasting our time trying to square the circle.*"

Astronomers know full well that it is no use appealing to the engineers, as their testimony is dead against the globular theory, although many of them believe in it all the same; but I never met one who said that he ever made the allowance said to be necessary for projecting railways on the surface of "our tiny globe." In "Theoretical Astronomy," page 46, the author tells us that :

"Mr. J. C. Bourne, in his magnificent work called 'The History of the Great Western Railway' . . . which is more than 118 miles long . . . *'the whole line with the exception of the inclined planes, may be regarded practically as level.'*"

One hundred and eighteen miles of LEVEL railway, and yet the surface on which it is projected a globe: Impossible. It cannot be.

Early in 1898 I met Mr. Hughes, chief officer of the steamer "City of Lincoln." This gentleman told me he had projected thousands of miles of level railway in South America, and never heard of any allowance for curvature being made. On one occasion he surveyed over one thousand miles of railway which was a perfect straight line all the way. It is well known that in the Argentine Republic and other parts of South America, there are railways thousands of miles long without curve or gradient. In the "Cruise of the Falcon," by that intrepid traveller and navigator, E. F. Knight, it is stated in Vol. 2, pages 1 and 2 :

"From Tucuman to Cordova we were carried by the Government railway." "There are no curves on the way, the rails being carried in ONE PERFECTLY STRAIGHT LINE ACROSS THE LEVEL PLAINS."

In projecting railways, the world is acknowledged to be a plane, and if it were a globe the rules of projection have yet to be discovered. Level railways prove a level world, to the utter confusion of the globular school of impractical men with high salaries and little brains.

RIVERS.

Rivers run DOWN to the sea because of the inclination of their beds. Rising at an altitude above sea-level, in some cases thousands of feet above the sea, they follow the easiest route to their level—the sea. The “Parana” and “Paraguay” in South America are navigable for over 2,000 miles, and their waters run the same way until they find their level of stability, where the sea tides begin. But if the world be a globe, the “Amazon” in South America that flows always in an easterly direction, would sometimes be running uphill and sometimes down, according to the movement of the globe. Then the “Congo” in West Africa, that always pursues a westerly course to the sea, would in the same manner be running alternately up and down. When that point of the globe exactly between them was up, they would both be running up, although in opposite directions; and when the globe took half a turn, they would both be running down! We know from practical experiment that water will find its level, and cannot by any possibility remain other than level, or flat, or horizontal—whatever term may be used to express the idea. It is therefore quite out of the range of possibility that rivers could do as they would have to do on a globe.

RIDICULE.

Sir D. Brewster speaks of a work, “the direct tendency of which was to ridicule and bring into contempt the grand discoveries in sidereal astronomy by which the last century has been distinguished.”

No wonder that supposed discoveries, which are really only baseless assumptions, should call forth volumes to bring contempt and ridicule upon the impossible theories by which the last century speculators made themselves ridiculous.

The “Birmingham Daily Mail,” of 25th November, 1893, states that :

“The astronomers arranged for a grand display of fireworks on Thursday night, the 23rd inst., but the ungrateful fireworks did not appear. The showmen now take refuge in the clouds which shrouded the sky and say the fireworks were there only they could not be seen. It is believed that throughout the night we were careering through a storm of red-hot meteorites, the fragments of a comet smashed by a blundering planet some forty years ago.”

When newspapers ridicule the thing it must be very odd, for they generally side with the professional men. "Morning Leader," of 21st November, 1892, has the following:

A VERY DISTINGUISHED VISITOR.

We have no desire to unduly alarm our readers, but our duty to the public compels us to announce *that to-night a collision may be expected between the earth and a comet*. The notice we give is somewhat short, so short indeed that if the worst comes to the worst, some distant readers may have barely learned the fact before the shock gives it an emphatic confirmation. The Rev. M. Baxter has somehow or other over-looked this noteworthy prediction, an oversight possibly accounted for by his feverish desire to discover some unfortunate individual who may be publicly described as "The Beast" without running foul of the law of libel.

Just at present it is perhaps risky to speak disrespectfully of comets, but it is undeniable that they are chiefly distinguished by their eccentricity. They resemble in no small degree political parties. They consist of a definite point or nucleus, with a remarkably nebulous tail preceding or following the nucleus. The tail precedes the nucleus when the comet has passed the perihelion and is receding from the sun, and it follows it when the sun is approached. That is to say, it is always to the front in a retreat and in the rear in an attack. As with the humble members of political parties, its distinguishing feature is prudence. Nor does the resemblance end here, for astronomers assure us that comets' tails are noted for their extreme tenuity. Stars which the slightest fog completely obscures shine through *millions* (?) of miles of their transparent material. In the same way it is easy to see through the motives and tactics of the political hanger-on. The nucleus is really the only part of a comet which need be noticed by practical men. The vaporous tails have frequently come within the earth's *attraction* (?) and have been absorbed into its atmosphere, just as the Liberal Unionists have been "merged" into the Tory party. *Whether the effect of the absorption of a comet's tail into our atmosphere has been salubrious or deleterious, or even if the event has had any perceptible influence at all, is only a matter of speculation among the learned.* This extremely negative result resembles the action of homœopathic medicines upon the human frame—at least, as described by allopaths. The moral seems to be that the world will be wise if it carefully avoids the nucleus to-night and collides simply with the tail. "Run into something cheap," shouted the economical peer to his coachman when his horses bolted down Piccadilly.

Mankind has received comets in various moods. Sometimes they have been hailed with rapturous welcome. They have been supposed to herald a superior wine vintage. The produce of 1811 and of 1858 was specially announced as "comet wines," and toppers declared that it was very good. On the other hand, *these eccentric heavenly bodies have been regarded with hatred and terror. They were included in a very uncomplimentary*

prayer in the year 1456. The Turks had just captured Constantinople, and it was feared that they would soon overrun Europe. A comet was hovering about at the time, and the pious of the day added to the Ave Maria the following supplication: "Lord save us from the devil, the Turk, and the comet." It is strange that at the end of the nineteenth century we should be threatened by the same three influences. The first seems destined to be always with us, the second will haunt us until the Eastern Question is really settled, and the third threatens to mend or end us to-night.

"Reynold's Newspaper," of 27th November, 1892, has the following :

"A Dalziel Telegram, dated Philadelphia, November 24, says Professor Synder, Instructor of Astronomy in the High School here, states that the earth last night collided with a comet in the Andromeda group and shattered it to pieces. This theory is said to receive confirmation by news from Illinois and other States, where there was a great fall of meteors. These are *supposed* to be the remains of the defunct comet."

The "Natal Mercury," of 20th August, 1898, says :

"To shift the axis of the earth from the poles to the equator M. Fouche, who has been working for years at the problem, says is perfectly possible. It is only necessary to accumulate a sufficient quantity of material to one point of the equator, and the earth will 'turn turtle,' and continue its rotation at right angles to its present turning, while climatic, zoological, and social changes would ensue. The question is, how much material? M. Fouche answers 66 sextillions of tons. With all the resources of steam, the operation could not occupy less than two million years."

THE SUN.

R. Russell, in his "Wonders of the Sun, Moon, and Stars," tells us, on page 86, that :

"The modern theory of the solar system maintains that the sun is comparatively motionless in the centre."

Our own senses testify against this delusion. No one ever yet felt or saw the earth careering through space at the terrific rates it is credited with, but every one who is not blind can see the sun move. But the matter can be tested. It may be known for certain whether the sun moves or not. Take a school globe and place a stile on the semicircle that holds it in position. Cause the globe to rotate against a lamp on a table, and you will find that the shadow left on the globe is always parallel to the equator, at whatever angle you may incline the globe. Further, let the stile be *of sufficient length* to allow the shadow to fall on to a flat

surface, moving the globe towards the lamp, and the shadow will be a straight line. If, therefore, the shadow left on the earth by the sun be a straight line, then undoubtedly the sun is stationary. Drive a stake into the ground in such a position as to expose it to the sun for the greater part of a day—the whole day if possible. Mark the end of the shadow every quarter of an hour, and you will find that the marks form part of an elongated curve, clearly proving that the sun moves over a stationary earth.

SUN'S DISTANCE.

R. A. Proctor, in his work "The Sun," says that :

"The determination of the sun's distance is not only an important problem of general astronomy, but it may be regarded as THE VERY FOUNDATION OF ALL OUR RESEARCHES."

In R. Russell's "Story of the Solar System," we are informed that :

"The mean distance of the earth from the sun may be taken to be about 93 million miles, and this distance is employed by astronomers as the unit by which most other long celestial distances are reckoned."

Seeing then, that everything depends on the knowledge of the sun's distance from the earth, it is no wonder that it is regarded as one of the prime problems in astronomy. Surely this will be right ; if not, all the rest will be wrong. Let us see what the wise men say. Let us see with what concurrence of "precise" calculations they agree as to this admittedly very important matter.

Sir R. Ball tells us that "the spirit of astronomical enquiry is NOT SATISFIED WITH APPROXIMATE RESULTS."

I have already quoted R. Russell as stating that the distance of the sun from the earth is 93 million miles.

In the "History of the Conflict between Religion and Science," by J. W. Draper, pages 173 and 174 inform us as follows on this important matter :

"In the time of Copernicus it was supposed that the sun's distance could not exceed five million miles, and indeed there were many who thought that estimate very extravagant. From a review of the observations of Tycho Brahe, Kepler, however, concluded that the error was actually in the opposite direction, and that the estimate must be raised to at least 13 million. In 1670 Cassini showed that these numbers were altogether inconsistent with the facts, and gave as his conclusion 85 million. The transit of Venus over the face of the sun June 3, 1869, had been foreseen and its great value in the solution of this fundamental

proposition in astronomy appreciated. With commendable alacrity various governments contributed their assistance in making observations, so that in Europe there were 50 stations, in Asia 6, in America 17."

"But on the discussion of the observations made at the various stations, it was found that THERE WAS NOT THE ACCORDANCE THAT COULD BE DESIRED—THE RESULT VARYING FROM 88 TO 109 MILLIONS. The celebrated mathematician, Encke, therefore revised them in 1822/4 and came to the conclusion that the sun's horizontal parallax, that is, the angle under which the semi-diameter of the earth IS SEEN FROM THE SUN, is $8.576/1000''$; this gave as the distance 95,274,000 miles. Subsequently the observations were reconsidered by Hansen, WHO GAVE AS THEIR RESULT 91,659,000. Airy & Stone by another method, made it 91,400,000."

"Theoretical Astronomy" informs us to the following effect:

"Copernicus computed the distance of the sun from us to be 3,391,200 miles; Kepler reckoned it to be 12,376,800 miles; Ricciola 27,360,000; Newton said it did not matter whether we reckoned it 28 or 54 millions, for he said that *either* would do well. Benjamin Martin in his Introduction to the Newtonian Philosophy . . . says that its distance is between 81 and 82 millions of miles . . . Thomas Dilworth says 93,726,900 miles; Mr. Hind has stated positively that it is 95,298,260 . . . Gillis & Gould say that it is more than 96 millions, and Mayer more than 104,000,000."

In the face of these alarming figures it would be a wonder if astronomical enquiry were satisfied with approximate, or any other RESULTS, for results are just what cannot be arrived at.

Regiments of figures are paraded with all the learned jargon for which science is famous, but one might as well look at the changing clouds in the sky and seek for certainty there, as to expect to get it from the pounders of modern astronomy. The authoress of "Sun, Moon, and Stars," however, comes to the rescue of the learned and tells us that:

"It is only of late years that the matter has been *clearly settled*. And indeed, it was found quite lately that a mistake of nearly 3,000,000 miles had been made, notwithstanding all the care and all the attention given . . . the distance of the sun from the earth is *no less than about* 91,000,000 miles."

Following after a certainty in modern astronomy, is like following a phantom. Sir R. Ball, in his "Story of the Heavens," page 28, completely destroys this "clearly settled" matter, for he says (and he ought to know):

"The *actual* distance of the sun from the earth is *about* 92,700,000 miles."

That saving clause "*about*" is very handy indeed.

As the sun, according to "science" may be anything from three to one hundred and four million miles away, there is plenty of "space" to choose from. It is like the showman and the child. You pay your money—for various astronomical works—and you take your choice as to what distance you wish the sun to be. If you are a modest person, go in for a few millions; but if you wish to be "very scientific" and to be "mathematically certain" of your figures, then I advise you to make your choice somewhere *about* a hundred millions. You will at least have plenty of "space" to retreat into, should the next calculation be against the figures of your choice. You can always add a few millions to "keep up with the times," or take off as many as may be required to adjust the distance to the "very latest" *accurate* column of figures.

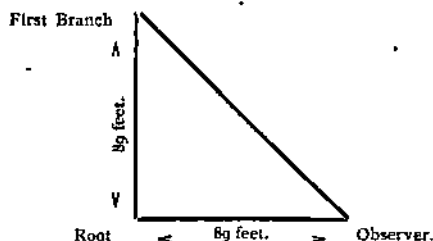
Talk about ridicule, the whole of modern astronomy is like a farcical comedy—full of surprises. One never knows what monstrous or ludicrous absurdity may come forth next. You must not apply the ordinary rules of common-sense to astronomical guesswork. No, the thing would fall to pieces if you did. But is there no means of testing these ever-changing never-stable speculations and bringing them to the scrutiny of the hard logic of fact? Indeed there is. The distance of the sun can be measured with much precision, the same way as a tree or a house, or church steeple is measured, by plane triangulation. It is the principle on which a house is built, a table made or a man-of-war constructed. It is used alike by the engineer and the carpenter. Let us put the statements of the learned as to the immense distance of the sun from the earth—anywhere between three and one hundred and four million miles—to this test.

When the sun is on the equator and thus has no declination, the angle it makes with the earth and sea at all points on that circle is a right angle. At an angular distance of 45° from the equator, north or south, the distance of the base line from the observer to the equator is of necessity the same as the sun's vertical distance from the earth's equator. That is to say, in any right-angled triangle where the angle at the apex of the triangle is 45° , the other angle must of necessity be the same; as these two angles in any such triangle are equal to the right angle, viz., 90° . The angles being equal the sides are of necessity equal; therefore the base line is equal to the vertical. This principle holds good whether the triangle represents a field plotted by the surveyor; the

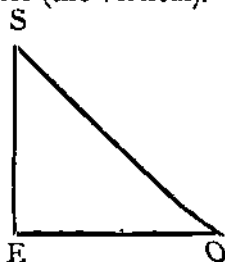
measurement of the roof of a house erected by the builder; the distance a ship is from the land, known as the "four point bearing"; or the distance of a heavenly body measured with a sextant, the minutes and seconds of which correspond to miles and sixtieths of miles reckoned on the earth's surface. Whether the measurement is vertical as in the case of a housetop, church spire, or the sun in the heavens; or horizontal as in the case of the ship's distance from the shore, or the land plotted by the surveyor, the same principle holds good. It is the principle on which Cook measured the height of a tree, as the following quotation tells us. In "Cook's Voyages," by A. Kippis, page 54, it is said that :

"One of the trees at the height of six feet above the ground, was 19ft. 8in. in girth. Lientenant Cook having a quadrant with him, measured its height from the root to the first branch, and found it to be 89 feet."

The following triangle illustrates this :



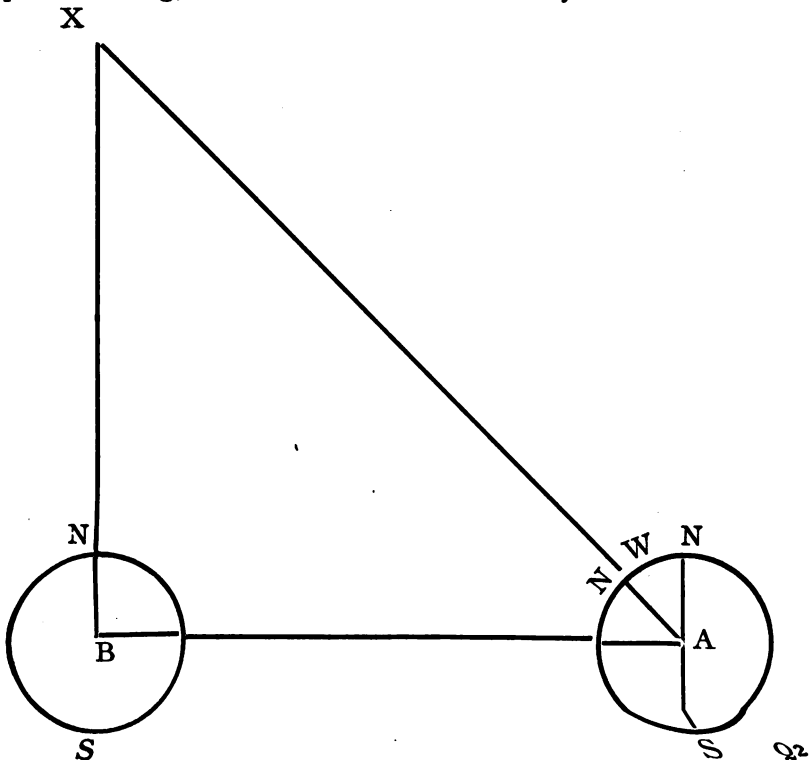
The reader will notice that the angle at the first branch is one of 45° , and the angle at the observer being the same, the *base line and vertical must be the same length AND CANNOT BY ANY POSSIBILITY BE LESS OR MORE.* Therefore if we can get a position 45° north or south of the equator when the sun has no declination, the distance from our place of observation to the equator (the base of the triangle), will be exactly equal to the distance of the sun from the earth's equator (the vertical).



Let S E O be a right angled triangle, right angled at E; S the sun, E the equator, and O an observer at 45° north latitude.

From the figure it is evident that 45° is the angular distance of the sun at 45° north, and no other angle can be got in actual practice (allowing, of course, for such corrections as height of eye, semi-diameter, &c.); so that the distance on the surface of the earth to the equator—from O to E, is the same as from the equator to the sun in the heavens—E to S. Multiplying 45 by 60 (60 geographical miles= 1° degree), we get 2,700 geographical miles as the distance from O to E and thus from E to S. THE SUN IS THEREFORE 2,700 MILES DISTANT FROM THE EARTH. If the Sun were 96,000,000 miles distant from the Earth, an observer at 45° N or S latitude would be that distance from the Equator!!!

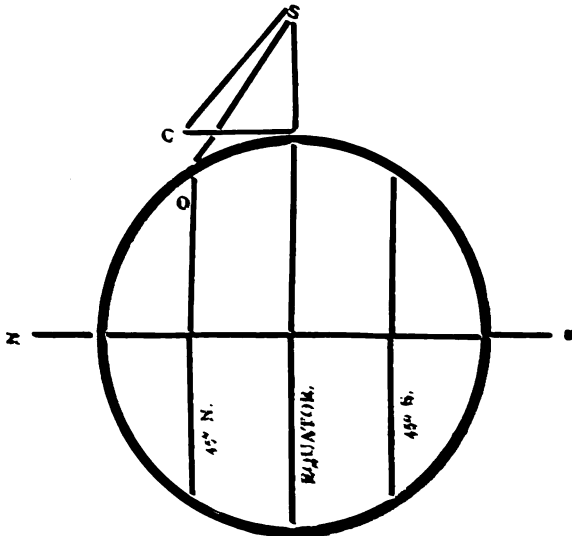
To make it perfectly clear to the *navigator*, let the following horizontal triangle represent the usual way the ship's distance from the shore is found, known as the four point bearing, to which reference has already been made:



Let X be the position of Beachy Head, bearing NW by compass from a vessel bound down channel; A the position of the vessel when the headland bears N W, and B her position when the headland bears N by compass. It is required to determine the vessel's distance from Beachy Head, when the ship is at the position marked B. As the navigator will well understand, the vessel must be put on the course corresponding to the four point bearing, and as Beachy Head bears N W the course is West, and when the land is abeam and bears N, the distance the ship has sailed from the first position to the second one, is the same distance the ship is from the land at the point B.

If the navigator will apply this principle to the sun's distance, he will at once see that the distance of the sun from the earth cannot be either more or less than the distance of 45° of latitude from the equator, viz, 2,700 nautical miles.

It may be objected that this measurement is on the assumption that the waters of the world are horizontal. This I have produced abundant evidence to prove is the case, but even if the earth were the globe of astronomical imagination, the following diagram will show that the distance is in no wise altered, and would be the same if the observer could get an observation on a globular surface.



Let O be the place of observation at 45° north or south latitude, and S the sun when it has no declination; then the angular distance of the sun is less than 45° , *on account of the depression of the observer's position*, THEREFORE the angle O S C must be added to the observation, being the allowance for CURVATURE to be made, which brings the observation to 45° . The distance on a globe, therefore, would be the same as on a flat surface, provided the observer could get an observation of the sun's angular distance on a globe; *which I have already shown to be impossible.* IT IS AS CERTAIN AS THAT TWO AND TWO ARE FOUR, THAT THE SUN'S DISTANCE FROM THE EARTH IS TWO THOUSAND SEVEN HUNDRED NAUTICAL MILES. We challenge the whole scientific world to disprove this statement.

SUN'S DIAMETER.

When we "read up" current science on the size of the sun, we shall find it as ridiculous and as far from the truth as the sun's distance has been shown to be.

Sir Robert Ball, in his "Story of the Heavens," page 26, says that :

"The diameter of the orb of day . . . is 865,000 miles."

This is enlarged upon by R. Russell, who tells us that :

"The sun's diameter is 882,000 miles."

A. Giberne, in "Sun, Moon, and Stars," considerably lessens the value of the figures, for she tells us that :

"The diameter of the sun is *no less* than 850,000 miles."

Then G. F. Chambers, in his "Story of the Solar System," comes to the rescue with the *true* diameter and says :

"The TRUE diameter of the sun is 866,000 miles."

Let the reader observe that the *differences* of the sun's diameter, as given to us by professionals is no less than 32,000 miles, and let him decide as to which diameter he prefers.

The sun is always somewhere between the tropics of Cancer and Capricorn, a distance admitted to be less than 3,000 miles; how then can the sun if it be so many thousand miles in diameter, squeeze itself into a space of about 3,000

miles only? How can a locomotive seven feet wide run on a two feet gauge of rails? Can a camel ride on the back of a mouse, or a whale rush down the throat of a herring?

But look at the distance, say the professors. We have already done that and not one of the wise men we have so often challenged, has ever attempted to refute the principle on which we measure the sun's distance.

These tall figures of the sun's supposed diameter must be relegated to oblivion with as scant courtesy and as little ceremony as the sun's distance had to be thrown aside. Fact compels us to get rid of these absurd notions and to spread abroad the truth concerning them. What then is the diameter of the orb of day? Thirty-two miles, I reply. How is that obtained? By the same practical and non-theoretical manner as his distance was obtained. If the navigator neglects to apply the sun's semi-diameter to his observation at sea, he is 16 nautical miles (nearly) out in calculating the position his ship is in. A minute of arc on the sextant represents a nautical mile, and if the semi-diameter be 16 miles, the diameter is of course 32 miles. And as measured by the sextant, the sun's diameter is 32 minutes of arc, that is 32 nautical miles in diameter. Let him disprove this who can. If ever disproof is attempted, it will be a literary curiosity, well worth framing.

THE STARS.

In the "Story of the Heavens," to which I have so often referred, we find that the cardinal doctrine of astronomy is said to be:

"That the sun is no more than a star, and the stars no less than suns."

And on page 32 of the same work we are told that:

"Every one of the thousands of stars that can be seen with the unaided eye is enormously larger than our satellite."

In "A Treatise on Astronomy," by E. Henderson, it is stated that:

"The probability is that every star is a sun far surpassing ours in magnitude and splendour. . . . Vega is 53,977 times larger than our sun."

The reader need not be alarmed at these statements, for *there is not one atom of truth in them*, THERE IS NOT A STAR IN THE SKY; NOT ONE BODY IN THE HEAVENS, THE SIZE OR DISTANCE OF WHICH IS KNOWN TO ASTRONOMERS. It is all speculation and guesswork, but very poor speculation and miserably bad guesswork. They are wrong every time and always. The sun's distance is the datum for measuring the distances and sizes of all the heavenly bodies, and as it is hopelessly wrong, as we have shown, ALL THE SIZES AND DISTANCES OF ALL THE HEAVENLY BODIES ARE WRONG ALSO.

STAR DISTANCES.

Sir Robert Ball, in his inimitable fairy tale already referred to (entitled the "Story of the Heavens"), says that:

"We now know the distances of a few of the stars, perhaps 20 or 30, with more or less accuracy, but of the distances of the great majority we are still ignorant. The observations for the determination of stellar parallax are founded on the *familiar truth that the earth revolves around the sun.*"

The statement that "we now know the distances" is unconditionally false. They do not know any one distance. Neither can they know, because the speculation is founded on a myth—the earth's supposed revolution round the sun, which I have shown to be impossible. But let us proceed, and see with what marvellous "accuracy" the distances are known.

On pages 414 to 421 of the work referred to, we find that:

"Bessel concluded that the distance (61 Cygni) was about 60 billion miles. Struve thought it could not be more than 40 billions of miles."

A *little* difference of 20,000,000,000,000 miles. How *very accurate*, to be sure.

Sir Robert then calmly informs us that:

"We shall presently show that we believe Struve was right, *yet it does not necessarily follow that Bessel was wrong.*"

What splendid logic, and what marvellous reasoning faculties! He then continues:

"As the distance of 61 Cygni is 40 billions of miles."

So that after all the putting forth of mighty intellectual power it seems that Bessel was wrong, because Sir Robert says that the star is 40 billion miles away, which is the distance given by Struve. And then follows an audacious statement:

"By the aid of our KNOWLEDGE OF STAR DISTANCES, combined with an *assumed* velocity of 30 miles per second, we can make the attempt to peer back into the remote past."

No, Sir Robert, you have not yet shown that you know the slightest of the *present* in your own profession, so we cannot take you as a guide to enable us to "peer back" into the past.

But how are star distances measured? Mr. Laing shall tell us. In his "Modern Science and Modern Thought," page 8, he says:

"The distance of the earth from the sun being 93 million miles, and its orbit an ellipse nearly circular; it follows that in mid-winter, in round numbers, it is 186 million miles distant from the spot where it was at mid-summer."

This is all supposition, which I have already shown does not contain a word of truth, and consequently whatever is built upon this foundation is worthless. Now it is evident to every thinking man that if the earth has travelled such an enormous distance in an ellipse so as to make the base line 186 million miles, all the stars will necessarily have altered in relative position, so that the matter can be easily tested. Now, what says Mr. Laing?

"What difference in the bearing of the fixed stars is caused by traversing this enormous base? The answer is, in the *immense majority of cases* NO DIFFERENCE AT ALL."

In the time of Tycho Brahe it was said that the earth revolved around the sun, but he argued that if the earth revolved around the sun, the relative position of the stars would change very much, and the matter must, in the nature of the case, be easily detected. Accordingly, experiments were tried at intervals of six months, and the result showed that the stars were in exactly the same position as they had occupied six months before, thus proving that the earth does not move at all. The "explanation" Mr. Laing gives is nullified by his own further statement. He tells us that:

"Their distance is so vastly greater than 186 million miles, that a change of basis to this extent makes no change perceptible to the most refined instruments in their bearings as seen from the earth."

The distance of the stars is an absolutely unknown quantity to the gentlemen of the observatories, as I have shown, so that this flimsy argument amounts to nothing. Besides this, the movement of the earth, if such ever took place, would be easily detected. But that such has never been observed, and that the relative position of the stars has not changed, proves that the earth is a fixture.

Mr. Laing goes on to refute his own statement of the case by stating that :

"The perfection of modern instruments is such, that A CHANGE OF EVEN ONE SECOND, OR ONE-THREE-THOUSAND-SIX-HUNDREDTH PART OF ONE DEGREE, in the annual parallax, as it is called, of any fixed star, WOULD CERTAINLY BE DETECTED."

By the most powerful and finely adjusted of modern instruments no change has ever been observed, so that Mr. Laing's laboured statement must be relegated to the limbo of conjectural absurdity.

Mr. Laing's case against the Bible would be the most telling that could be made out, if his statements were within a million miles of the truth, but they are absolutely without the slightest foundation and must be thrown into the "scientific" waste-paper basket.

Another writer who uses his not inconsiderable ability in the same direction is Dr. Draper, author of a work I have already quoted from, "The History of the Conflict between Religion and Science." On the subject of star distances, he says, page 156 :

"Considering that the movement of the earth does not sensibly affect the apparent position of the stars, he (Aristarchus) inferred that they are incomparably more distant from us than the sun He saw that the earth is of absolutely insignificant size when compared with the stellar universe. He saw too, that there is nothing above us but space and stars."

What a marvellous vision this man must have had! Had it only been stated what Planet this adventurer chartered to take his trip "above us" to see what there was there, the fairy tale would have been complete.

THE SEASONS.

R. Russell tells us in his "Wonders of the Sun, Moon, and Stars," pages 16 and 17, that :

"The nearer the sun gets to the Pole Star the earlier it rises, the higher it reaches at noon, and the later it sets; and the further it gets from the Pole Star the later it rises, the lower it is at noon, and the earlier it sets. *This apparently independent motion of the sun* therefore, seems to account for longer and shorter days and the whole phenomena of the seasons; but why the sun lags as described, or why it moves northerly and southerly at alternate periods, *there is no apparent evidence.*"

On the supposition that the world is a globe rotating against the sun, and revolving round that luminary, it is impossible to account for what Mr. Russell calls the lagging movement of the sun. But on a flat surface like the world is known to be, there is no assumption needed to account for it. As I have shown, the earth is a stretched-out structure, which diverges from the central north in all directions towards the south. The equator, being midway between the north centre and the southern circumference, divides the course of the sun into north and south declination. The longest circle round the world which the sun makes, is when it has reached its greatest southern declination. Gradually going northwards the circle is contracted. In about three months after the southern extremity of its path has been reached, the sun makes a circle round the equator. Still pursuing a northerly course as it goes round and above the world, in another three months the greatest northern declination is reached, when the sun again begins to go towards the south. In north latitudes, when the sun is going north, it rises earlier each day, is higher at noon and sets later; while in southern latitudes at the same time, the sun as a matter of course rises later, reaches a lesser altitude at noon and sets earlier. In northern latitudes during the southern summer, say from September to December, the sun rises later each day, is lower at noon and sets earlier; while in the south he rises earlier, reaches a higher altitude at noon, and sets later each day. This movement round the earth daily is the cause of the alternations of day and night; while his northerly and southerly courses produce the seasons. When the sun is south of the equator it is summer in the south and winter in the north; and *vice versa*. The fact of the alternation of the seasons flatly contradicts the *Newtonian* delusion that the earth revolves in an orbit round

the sun. It is said that summer is caused by the earth being nearest the sun, and winter by its being farthest from the sun. But if the reader will follow the argument in any text book he will see that according to the theory, when the earth is nearest the sun there must be summer in both northern and southern latitudes; and in like manner when it is farthest from the sun, it must be winter all over the earth at the same time, because the whole of the globe-earth would then be farthest from the sun!!! In short, it is impossible to account for the recurrence of the seasons on the assumption that the earth is globular and that it revolves in an orbit round the sun.

SIGNALS ON SEA AND LAND.

Pearson's Weekly of the 29th December, 1894, says:

"Evidently we have not got at the bottom of the matter yet. In August, 1890, the C Manouvre Fleet signalled with searchlights to Colliers, 70 miles away . . . The information comes from Mr. F. T. Jane, the Artist who was on board at the time."

According to the Astronomers, these vessels should have been 3,200 feet below the horizon, allowing for a height of 40 feet on the signalling vessel, and 26 feet on the Colliers!!!

Harper's Weekly of 20th October, 1894, contains particulars of an experiment made by the Signal Corps of the U.S. Army, with the Glassford flashlight or heliograph.

The signal stations were Mount Uncompahgre, in South Western Colorado, and Mount Ellen in Southern Utah; the former 14,418 feet above sea level, the latter 11,410 feet; the plateau lying between the two stations is 7,000 feet higher than the sea. According to the calculated rate of curvation of a spherical body of 25,000 miles in circumference, a straight line running at *right angles* with the *perpendicular* at the transmitting station, Mount Uncompahgre, would run as a *tangent* from the line of curvation so that in the distance of 183 miles, the curvation would place Mount Ellen *downward* from the tangent line, *below* the line of vision *nearly 3½ miles!* and yet the receiving station was seen on a *line with the eye* from Mount Uncompahgre, on a line *coincident with the "tangent" line!!!*

SURVEYING.

In Robinson's "New Navigation and Surveying," page 25, it is stated :

"The spirit-level is used to determine a horizontal line. A horizontal line is at right angles to the vertical. It is a level line."

And on page 33 the following occurs :

"To adjust a theodolite measure very carefully the distance between two stations, and set the instrument half way between them. Now bring the level near to one of the stations, level it carefully and sight the rod. Note the number on the rod, say 6 feet, and have the rod man go to the other station and place his target on the rod, just 6 feet. When the telescope is turned upon it the horizontal spider line ought to just coincide with the target, and will if the instrument is level or in perfect adjustment."

This proves that the whole of the line from the extremities at either side of the instrument, passing through the telescope is a level or straight line, impossible on a globe. And the further fact that in surveying, no allowance is made for the supposed curvature of the earth, demonstrates that the earth is a plane. The surveyor is, in many cases, deluded by the speculations of the learned. They tell him that because he takes his sights midway between two stations, the allowance for curvature is made. But we have shown from a text-book that the line is a level or straight line, so that the learned are all wrong. And if a section of a globe be drawn and the instrument shown at various equal distances, *to get a continuous straight line, the instrument would have to be taken up off the globe into space.*

That in all surveys no allowance is made for curvature, which would be a necessity on a globe ; that a horizontal line is in every case the datum line, the same line being continuous throughout the whole length of the work ; and that the theodolite cuts a line at equal altitudes on either side of it, which altitude is the same as that of the instrument, clearly proves, to those who will accept proof when it is furnished, that the world is a plane and not a globe.

SCIENCE.

"Lux " of the 13th January, 1894, has the following :

"What a lovely thing the word 'science' is ! There was an old lady who, in times of trouble and anxiety, always found com-

fort and peace in 'that blessed word, Mesopotamia'. But that aged person is not in it with the old women who find a solace in that blessed word 'science'. The latest thing in 'science' is the 'Interstellar Medium'. Space is not void, we are to believe as commanded by 'science', but it is filled with a kind of stuff called ether. It conveys lights from the stars at, say, the rate of 186,300 miles per second. Light comes in waves. The waves have a mean value of 50,000 to the inch. This light comes 60,000,000,000,000,000 waves in one second of time. Some stars, according to Herschel, take 300,000 years to send their light to our earth! Go on, work it out!! When found, make a note of it, and then say 'science' doesn't want about 1,000 times more faith than Christianity, if you can!"

In "Paul Petoff," by F. Marion Crawford, on page 117, it is stated:

"We talk more nonsense about science than would fill many volumes: because, though we devote so much time to the pursuit of knowledge, nevertheless the amount of knowledge actually acquired, beyond all possibility of contradiction, is ludicrously small as compared with the energy expended in the pursuit of it, and the noise made over its attainment. Science lays many eggs, but few are hatched. Science boasts much, but accomplishes little; is vainglorious, puffed up, and uncharitable; desires to be considered the root of all civilization, and the seed of all good, whereas it is the heart that civilises, and never the head."

"Sigma," in the "English Mechanic" for 5th October, 1894, supplements the above as follows:

"We have any quantity of hypotheses thrust upon us as discoveries, which are merely false knowledge that later science will have to unlearn. As a matter of fact, the fashionable notions that are paraded as 'science' stand only because their advocates shut their eyes to realities, make assertions with little or no fact to start from, ignore the facts which do not suit them, refuse to meet objections, and ignore any really scientific (that is provable) explanations which do not agree with the specialistic facts."

"Science" is a very inclusive term, as the foregoing extracts show. It is the cloak under which thousands of humbugs flourish and grow great, "science," however, sometimes exposes "science," as the following from "Modern Science and Modern Thought," page 43, shows:

"In this state of things the moon is supposed to have been thrown off from the earth Now these conclusions may be true or not as regards phases of the earth's life prior to the Silurian period, *from which downwards* GEOLOGY SHOWS UNMISTAKABLY THAT NOTHING OF THE SORT, OR IN THE LEAST DEGREE APPROACHING IT, HAS OCCURRED."

When Geology mocks at Astronomy, we may leave the two combatants to fight it out, for they are both fables.



This all taken from the Plot Against the Church Online Edition 600+ pages. Verified from a physical copy from 1967.

old acquaintances. To his question how things went with the order, he answered: 'I have finally left the lodge of my Order for I have gained the deep conviction that we were only the tools of the Jews, who drive us to the total destruction of Christianity.' (La F.M. Sete Juive, 43-46).

"As confirmation of the above I will reproduce a report, which is found in the 'Revue des Sociétés Secrètes' (p. 118-119, 1924):

1.) The Golden International (International Plutocracy and High Finance), at whose head are found:

a) In America: J. P. Morgan, Rockefeller, Vanderbilt and Vanderlip.

b) In Europe: the firm of Rothschild and others of second rank. Rothschilds are a syndicate with many other jew families and allies.

2.) The Red International or international association of Social Democratic workers. This comprises:

a) The Second International (that of Belgium, Jew Vandervelde).

b) The International No. 21/2 (that of Vienna, Jew Adler).

c) The Third International or Communist International (that of Moscow, the Jews Apfelbaum and Radek). This hydra, with three heads, which works separately for better effect, has at its disposal the 'Prointern' (International bureau of professional associations), which has its seat in Amsterdam and which dictates the Jewish word to the Syndicates that have still not been incorporated into Bolshevism.

3.) The Black International or combat organisation of Jewry. The chief roles in it are played by: the world organisation of Zionists (London); the Israelite world league, which was founded in Paris by the Jew Cremieux; the Jewish order of the B'nai-Moiche (Sons of Moses) and the Jewish societies 'Henoloustz', 'Hitakhdoute', 'Tarbout', 'Karen-Haessode', and a hundred more or less masked organisations,

Stalin killed by jews because of the destructive infighting between moscow jews and NY jews over world leader, which Stalin wanted to be. Crypto jew Roosevelt also wanted to be supreme jew world leader, antichrist. Lookup the Library of Political Secrets by Itsvan Bakony.

Kabbalistic dialectical materialism: Central bankster/monopoly megacorps VS Communism. Grand Dialectic for Jew World Order of slavery. Synagogue of Satan and Crypto army. A Planned synthesis.

It is now known that Morgan etc was a rothschild front and that the Rockefeller are crypto-jews, most likely rothschild family relations.

Marx was a crypto jew, as was engels, lenin, stalin, trotsky, kerensky, stalin, khrushchev and many many others

The "English Mechanic" of 4th January, 1889, says:

"The whole of astronomical science so far as the stellar universe is concerned is founded upon a false basis. This arises from the fact that the construction of the heavens in respect to the apparent arrangements of the stars in space is always erroneous, and *yet necessarily all astronomy is founded upon this suppositious situation of the stars.*"

Commenting on "Scientific Dogmatism," the "Daily News" of 5th December, 1893, says:

"Mr. Tyndall resigned in 1887 the Professorship at the Royal Institution which he had held for more than thirty years He never had any doubt about anything, from Home Rule to spontaneous generation, from the composition of dust to the origin of things . . . But while Professor Tyndall, the brilliant lecturer, the luminous expositor, the interpid climber, the pugnacious controversialist, the genial and amiable companion, was in many respects an interesting personage, no part of his character would repay study so well as the scientific dogmatism in which it was all steeped. Dr. Arnold protested half a century ago in his entertaining, if not very practical, notes on Thucydides, against what, as a philological student, he discerned to be a tendency of the times. 'It is not to be endured, he said, that scepticism should run at once into dogmatism, and that we should be required to doubt with as little discrimination as we were formerly called upon to believe.' Dr. Arnold was of course referring directly and immediately to the tampering of commentators with the text of the Greek historian. But the symptom which he observed has spread into other spheres, and for the old tyranny of the Church there has been substituted the despotism of the laboratory. The 'delight of dealing with certainties' described by an accomplished man of letters, who made an hasty plunge into the 'Principia', is a high form of mental enjoyment. But it is rather a dangerous guide through the maze of conflicting probabilities, from which even the sacred College of Science has not yet succeeded in delivering the human race

Mr. Balfour wrote a book which is not nearly so well known as it ought to be. The 'Defence of Philosophic Doubt' is dry and unattractive in form. But it is acute and ingenious in substance. It would be a more agreeable work if it were written in literary English. It would be a more candid one if it mentioned the name of David Hume. It is, notwithstanding these drawbacks, a valuable antidote to the pretensions of modern science. In it Mr. Balfour, one of the few living Englishmen with a real aptitude for philosophy, turns against the exaggerated claims of science the argument formerly employed with so much vigour against the exaggerated claims of theology. 'It is useless,' he says in effect, 'to tell me that your conclusions are true because they are universally accepted. What is the ignorant impression of the unthinking multitude really worth?' Mr. Balfour is fond of paradox, and he may press his theory too far. But at least he deserves credit for pointing out that the *infallibility* of science rests on no surer foundation than any other

form of orthodox opinion. The greatest names in scientific history cannot be cited to support the doctrine that a knowledge of physics, however accurate and extensive, entitles its possessor to lay down the law on final causes and the origin of things. In his famous address at Belfast nearly twenty years ago, Professor Tyndall declared that matter contained the power and potency of every form of life. If this phrase was more than empty rhetoric it implied that Professor Tyndall knew how the world came into existence, and how life began. Mr. Darwin, the greatest man of science since Newton, if not since Aristotle, put forward no such assumption. In humble and dignified language he explained that his marvellous generalisations with reference to the origin of species and the decent of man began, as they ended, with a living creature. He traced man to the marine ascidian. The marine ascidian he did not pretend to trace."

THE TIDES.

It is commonly taught that the tides are caused by lunar attraction. Sir Robert Ball tells us that :

"The moon attracts the solid body of the earth with greater intensity than it attracts the water at the other side which lies more distant from it. The earth is thus drawn away from the water, which accordingly exhibits a high tide as well on the side of the earth away from the moon as on that toward the moon. The low tides occupy the intermediate positions."

No one who has the use of all his faculties and who dares to use them, need be told that this flimsy apology for what the learned cannot account for, contradicts itself. How could this attraction take place without disintegrating the globe? Besides, as the law of gravitation is said to operate according to the amount of matter of which each body consists, the statements of astronomers that the moon is 2,160 miles in diameter and the earth 8,000 miles in diameter flatly contradict their own other statements about the moon causing tides. How can the smaller body attract the larger? We are informed in "Sun, Moon, and Stars," pages 160 to 163, that :

"The earth, it is true, attracts the moon. So also the moon attracts the earth; **THOUGH THE FAR GREATER WEIGHT OF THE EARTH MAKES HER ATTRACTION TO BE FAR GREATER.**"

How anyone can accept the current theory in face of the above, is somewhat puzzling. Sir R. Ball says the moon

attracts the solid body of the earth ; but the work from which I have just quoted states that :

" Her attraction (the moon's) draws up the yielding waters
"of the ocean in a vast wave."

Both these assertions cannot be true. Which is? I say neither. And the astronomers' own theory of attraction also answers "neither," when it is taken into consideration that the moon cannot attract the earth, being a much smaller body.

But if the moon lifted up the waters, it is evident that near the land, the water would be drawn away and *low*, instead of high tide, caused. Again, the velocity and path of the moon are uniform, and it follows that if she exerted any influence on the earth, that influence could only be a uniform influence. But the tides are not uniform. At Port Natal the rise and fall is about six feet, while at Beira, about 600 miles up the coast, the rise and fall is 26 feet. This effectually settles the matter that the moon has no influence on the tides.

How then are tides caused? The learned being as far from the truth in this as in every matter which we have brought to the test of the hard logic of facts, what is the truth of the matter?

The *Leicester Daily Post*, of 25th August, 1892, says :

"M. Bouquet de la Grye, an eminent hydrographical Engineer, has after long years of study calculated the atmospheric expansions and depressions which coincide with spring and neap tides. There have been cases in which air was moved in waves of 133 yards high, and in places where the barometrical pressure was seven-tenths of an inch, of six and a half miles. Near the upper surface of the earth's atmosphere condensations and dilations of this magnitude are frequent. The human nervous system may be said to register these air waves. We are only aware that they do so by the discomfort which we feel. The earth also registers them and to its very centre. The incandescent and fluid matter under the earth's crust acts in concert with the air and sea at the full of the moon. In 1889 a German Scientist, Dr. Rebeur Pachwitz, thought he noticed at Wilhelmshaven and Potsdam earth oscillations corresponding with the course of the moon. He wrote to the observatory at Teneriffe asking for observations to be made there in December, 1890 and April, 1891, which would be propitious times for them. *From these observations and others simultaneously made in the sandy plains round Berlin, IT WAS ESTABLISHED THAT THE EARTH RISES AND FALLS LIKE THE OCEAN OR THE ATMOSPHERE.* The movements, common to them all, may be likened to the chest in breathing.—Paris Correspondent Weekly Dispatch."

This is the answer to the question. Tides are caused by the gentle and gradual rise and fall of the earth on the bosom of the mighty deep. In inland lakes, there are no tides ; which also proves that the moon cannot attract either the earth or water to cause tides. But the fact that the basin of the lake is on the earth which rests on the waters of the deep, shows that no tides are possible, as the waters of the lakes together with the earth rise and fall, and thus the tides at the coast are caused ; while there are no tides on waters unconnected with the sea.

The "Yellow Frigate," by Jas. Grant, page 189, states :

"St. Mungo's Tide. This double flow is somewhat remarkable, for when the tide appears full it suddenly falls fifteen inches, and then returns with greater force, until it attains a much higher mark."

The following is from "Omoo, a Narrative of Adventures in the South Seas," by H. Melville :

"The Newtonian theory of the Tides does not hold good at Tahiti, where, throughout the year, the waters uniformly commence ebbing at noon and midnight, and flow about sunset and daybreak. Hence the term 'Toorerar-Po' is used alike to express highwater and midnight."

The question may now be asked, what has the moon to do with the tides ? The moon is the TIMEKEEPER for the tides, nothing more. The "phase" of the moon tells what kind of a tide may be expected, but she does not and cannot "attract" either the solid body of the earth or the waters. What Zetetics have stated for many years past, is now seen to be true, but "science" is slow to take advantage of the fact.

THE ULTIMATE CONCLUSIONS OF SCIENCE IN RELATION TO BIBLE TEACHING.

In the preceding pages it has been clearly shown that the Copernican or Newtonian System of Astronomy is an absurd composition of meaningless expressions, false ideas, and mechanical impossibilities. In our consideration of the subject—and we have touched upon all the important items—we have not found one statement which does not require a supposition to start with ; not a single fact has been elicited from the published books on the subject written by the

S

profession; and contradictions have been found in all the most important component parts of the "science," which effectually refute the system and destroy its claims. Hence, the whole hypothesis must be rejected as a snare and a delusion, without a vestige of fact or possibility to support its bold, unwarranted, and Infidel conclusions.

I shall now proceed to demonstrate that when the fictions of the system are received as facts, the logical necessity arises for disposing of the Bible as a collection of old wives' fables. I shall also quote from the Scriptures themselves, to prove conclusively that NATURE and the BIBLE *are in perfect agreement.*

In Paine's "Age of Reason," it is stated that :

"The two beliefs—modern astronomy and the Bible—cannot be held together in the same mind; he who *thinks* he believes both has *thought* very little of either."

However much many well-meaning Christians may affect to ignore this statement, it is nevertheless true. The system of astronomy at present in vogue is the very opposite of the facts of nature, as we have abundantly demonstrated. The facts of nature are in perfect harmony with the Bible, as we shall presently see.

The most casual and superficial reader of the Bible must see that it claims to be of Divine Origin. He must further see that the Author of the Bible claims to be the Builder of the Universe. And he must still further see that the world is described in this Book which claims to be from God as being built upon the waters of the mighty deep, which foundations are not to be discovered by man; that the Sun, Moon, and Stars are inferior to the world we live on, and that they move above the earth, which is at rest.

How, then, can a thinking person affect to believe the Bible *and* a system which teaches the very opposite of the teaching of that Volume. The logical conclusion is that if the statements of modern astronomy be true, the Bible cannot be what it claims to be—THE WORD OF GOD. We have already shown that there is not so much as one true statement in all modern astronomy concerning this world—that the whole thing is a fake and a fable, an ingenious hoax. It is, therefore, not incumbent on any one to believe the imposture; but all lovers of truth should join hands in exposing the thing. We shall now see that the extravagant and false ideas of the scientific world have led the more daring intellects to despise Bible teaching, and, in some cases, to reject the idea of the existence of a

personal God at all. But we shall also show that such conclusions are merely the logical sequence of belief in the impossible theories of the "learned." Two opposite things cannot both be true, and the "scientists" thinking that modern astronomy is true, have only been acting in a logical manner by rejecting the teaching of the Bible.

R. A. Proctor, in his work entitled "Our Place Among Infinities," page 3, unblushingly states :

"To speak in plain terms, *as far as science is concerned*, THE IDEA OF A PERSONAL GOD IS INCONCEIVABLE, as are also all the attributes which religion recognises in such a being."

A Durban gentleman told the writer some time ago that :

"When the Bible speaks of physical things such as the earth, IT IS ABSOLUTELY UNTRUE."

And a "reverend" gentleman told me in April, 1898, that :

"The Bible is only inspired when it speaks on matters of the soul; when it speaks on physical matters, such as astronomical facts, IT IS MERELY THE OPINION OF THE WRITERS."

But if the first two statements are only the logical sequence of believing the fictions of modern science to be facts, what shall we say about the third? It is much more inconsistent than anything that the avowed enemies of the Gospel could devise. They believe science and *therefore* disbelieve the Bible, which is contrary to science. But to believe *both* to be correct as some do, or to say that when the Bible speaks of physical facts it is only the opinions of the writers and not inspired, is to refute any statement made as to inspiration in any other direction.

Obviously, if the Bible be not true in matters scientific, it cannot possibly be true on any other matter. It is either true in part and true altogether, or false in part and false altogether. Between modern astronomy and the Bible, there is not so much as an inch of standing ground; if the one be true the other and opposite statement is false.

But there are a great many Christians who do not seem able to arrive at any logical conclusion in the matter. They take for granted that what science teaches is true, because many "learned" men believe it. But when brought face to face with the fact that Bible and astronomical teaching are contrary the one to the other, and because men believe

science, *therefore* they disbelieve the Bible; they at once begin to say that the statements in the Bible concerning the world are merely "poetic" or "symbolic" and by no means literal. But before arriving at such a conclusion it must, in all fairness, be shown that those passages which teach that the world is at rest, and the sun, moon, and stars are moving over and around it, are consistent with other passages which are, admittedly, not symbolical, but literal beyond all controversy. I may instance Joshua commanding the sun to stand still, which, if the reference to its movement in Psalm 19 be symbolical and not literal, brings to light a serious discrepancy, for the Scriptures say that the sun did stand still. Now, according to modern astronomy, the sun never does anything but stand still. Does it not, therefore, seem very absurd that a General of a large army should be so ignorant about such a simple matter, of which his God had already spoken, and yet be the leader of a people called out of Egypt by God; not knowing whether the sun or the world moved; and must not the Scripture which distinctly states that, the sun was made to stand still, be very absurd, if the sun always stands still?

Then again, Christ is said to have been shown all the kingdoms of the world in a moment of time. This is admittedly literal. But if the passages which refer to the world standing still be symbolical, and the world be moving, turning upside down in fact, it would have been quite impossible for Christ to have seen all the kingdoms of the world in a moment, as some of them would be far below the horizon, on the other side of the revolving ball.

Many such statements could be produced, showing the absurdity of the symbolical idea, and clearly indicating that the question in its literalness must be faced, whatever the issues be.

If the Christian thinks that the Scriptures are symbolical in this matter, the infidel, who searches the volume in order to find discrepancies, knows that it is very literal; and comparing one passage with another very soon discovers that, from Genesis to Revelation, there is a marvellous consistency of teaching that the world is at rest and that sun, moon, and stars move around and above it. He therefore concludes that, inasmuch as Bible teaching is opposed to what he is pleased to denominate the "ascertained facts of science," the Bible must be untrue in matters scientific, **AND THEREFORE, UNTRUE IN EVERY PARTICULAR.** And if the reader will just apply the ordinary rules of

common-sense, he will see that if the Bible be not true in these things, it cannot be true in any, and, therefore, must be rejected *in toto*. If, for example, the world be the globe of popular belief, it is impossible that there ever could have been a universal flood. For such a thing to have happened, it would be required to blot out the whole universe, to stop the revolution of the globe and to bring confusion and ruin to the whole of the "solar system." But the Bible does teach that there was a universal deluge, and that is admittedly literal. Not only so, but Christ refers to the deluge. If, therefore, no deluge ever happened, it would be very inconsistent to ask any one to believe in Christ, who testified that that great catastrophe actually took place. In the present enquiry, therefore, we must leave the whims and prejudices of those who say they believe the Bible, and yet accept as truth the teaching of modern astronomy, which is the direct opposite of, and gives the lie to, Bible teaching; and see where the acceptance of the globular theory has led them to. If it were consistent with Bible teaching, it would naturally lead them to the Bible and the Christ of the Bible; inconsistent with the facts of the Bible, it could only lead them to doubt and deny that Book.

In *Lucifer*, of 23rd December, E.M. 287 (*i.e.*, 1887 A.D.), the following occurs :

"We date from the first of January, 1601. This era is called the Era of Man (E. M.) to distinguish it from the theological epoch that preceded it. In that epoch the earth was supposed to be flat, the sun was its attendant light revolving about it. Above was heaven, where God ruled supreme over all potentates and powers, below was the kingdom of the Devil, Hell. So taught the Bible. Then came the NEW ASTRONOMY. It demonstrated that the earth is a globe revolving about the sun; that the stars are worlds and suns; that there is no 'up' and 'down' in space, VANISHED THE OLD HEAVEN, VANISHED THE OLD HELL; the earth became the home of man. And when the modern cosmogony came, the Bible and the Church as infallible oracles had to go, for they had taught that regarding the universe WHICH WAS NOW SHOWN TO BE UNTRUE IN EVERY PARTICULAR."

In *Reynolds' Newspaper*, of 14th August, 1892, under the heading of "Democratic World," the following appeared :

"We are trembling on the eve of a discovery which may revolutionise the whole thought of the world. The almost universal opinion of scientific men is that the Planet Mars is inhabited by beings, like or superior to ourselves. Already they have discovered great canals cut on its surface in geometrical form, which can only be the work of reasoning creatures. They have seen its snowfields, and it only requires a telescope a little stronger than

those already in existence to reveal the mystery as to whether sentient beings exist on that planet. IF it be found that this is the case, THE WHOLE CHRISTIAN RELIGION WILL CRUMBLE TO PIECES. THE STORY OF THE CREATION HAS ALREADY BECOME AN OLD WIFE'S TALE. HELL IS NEVER MENTIONED IN ANY WELL-INFORMED SOCIETY OF CLERGYMAN; the devil has become a myth. IF Mars is inhabited, the irresistible deduction will be that all the other planets are inhabited. This will put an end to the fable prompted by the vanity of humanity that the Son of God came on earth and suffered for creatures WHO ARE THE LINEAL DESCENDENTS OF MONKEYS. It is not to be supposed that the Hebrew carpenter, Jesus, went about as a kind of theosophical missionary to all the planets in the solar system, re-incarnate, and suffering for the sins of various pigmies or giants, as the case may be, who may dwell there. The astronomers would do well to make haste to reveal to us the magnificent secret which the world impatiently awaits."

Professor W. B. Carpenter, in his paper in the *Modern Review* for October, 1880, protests that science has excluded God from Nature. He says :

"While, however, the idea of Government by a God IS NOW EXCLUDED BY GENERAL CONSENT FROM THE DOMAIN OF SCIENCE, the notion of Government by law has taken its place, not only in popular thought, but in the minds of many who claim the right to lead it; and it is the validity of this notion which I have now to call in question . . . PHILOSOPHY FINDING NO GOD IN NATURE NOR SEEING THE WANT OF ANY."

"The advanced philosophy of the present times goes still farther, asserting that THERE IS NO ROOM FOR A GOD IN NATURE."

These conclusions are the inevitable result of believing the current theories regarding the evolution of the world in opposition to Bible statements, that it is the product, not of evolution, but of special creation. This is the conclusion to which the world is fast hastening--NO ROOM FOR GOD IN NATURE. And when natural truth is rejected to keep pace with unnatural and fictitious science, no marvel if spiritual truths as revealed to man by his Creator, are rejected also. The one is the natural outcome of the other.

S. Laing, in his "Modern Science and Modern Thought," tells us that :

"Attempts to harmonise the Gospels and prove the inspiration of writings which contain manifest errors and contradictions, have gone the way of Buckland's proof of a universal deluge, and of Hugh Miller's attempt to reconcile Noah's Ark and the Genesis account of creation WITH THE FACTS OF GEOLOGY AND ASTRONOMY."

The words "the facts of geology and astronomy" reveal the whole of the case for the infidel. He supposes that his assumptions are true. He assumes that his assertions are facts and THEREFORE the Bible, which tells against his so-called "facts" must be untrue.

I have already shown that astronomy has not yet chronicled one fact regarding this world; that the "facts" of astronomy regarding the enormous size, and by consequence the immense distance of the stars, are fictitious every one; that, in fact, modern astronomical "science" is untrue altogether and unworthy the credence of any man, THEREFORE THE GREAT OUTCRY made by the "scientific" world against the Bible HAS ABSOLUTELY NO FOUNDATION.

On pages 178 and 179 of Draper's "Religion and Science," it is said:

"In his 'Evening Conversations' he (Giordano Bruno) had insisted that the Scriptures were never intended to teach science, but morals only; and that they cannot be received as of any authority on astronomical and physical subjects. Especially must we reject the view they reveal to us of the constitution of the world, that the earth is a flat surface, supported on pillars: that the sky is a firmament—the floor of heaven. On the contrary we must believe that the universe is infinite, and that it is filled with self-luminous and opaque worlds, many of them inhabited."

Bruno, like many now, was afraid of incurring the wrath of the priesthood by stating that the Bible was untrue, so he made a kind of compromise, as the above extract shows. But his argument does not require a second reading to show that if the science of the Bible be untrue, its moral teaching must be equally so. Mr. Laing further tells us:

"Now it is absolutely certain that portions of the Bible, and these important portions relating to the creation of the world and of men *are not true and therefore* not inspired. IT IS CERTAIN THAT THE SUN, MOON, STARS AND EARTH WERE NOT CREATED AS THE AUTHOR OF GENESIS SUPPOSED THEM TO HAVE BEEN CREATED . . . IT IS CERTAIN THAT NO UNIVERSAL DELUGE EVER TOOK PLACE SINCE MAN EXISTED."

And on pages 278 and 279 he adds:

"It is as certain as that two and two make four, THAT THE WORLD WAS NOT CREATED IN THE MANNER DESCRIBED IN GENESIS; THAT THE SUN, MOON AND STARS ARE NOT LIGHTS PLACED IN THE FIRMAMENT OR SOLID CRYSTAL VAULT OF HEAVEN, TO GIVE LIGHT UPON THE EARTH . . ."

This "absolute certainty" is the creation of the imagination, for there is not one FACT in nature that modern science can bring forward in support of the contention. The whole thing, from start to finish, is a myth, as we have abundantly demonstrated, and must be rejected.

Mr. Laing further says that :

"The conclusions of science are irresistible, and old forms of faith, however venerable and however endeared by a thousand associations, have no more chance in a collision with science than George Stephenson's cow had, if it stood on the rails and tried to stop the progress of a locomotive."

From purely practical data we have already seen that "the conclusions of science" are as unreasonable and fallacious as it is possible for the human mind to conceive. A mixture of infidel superstitions and gross absurdities constitute the most of present-day science respecting the world we live on. Its relation to truth is as darkness to light. Science has as much chance in a collision with TRUTH as a rotten ship would have in a collision with an ironclad.

Even professedly Christian people are hoodwinked and befogged by modern hypothetical science.

A. Giberne in "Sun, Moon and Stars," says, when speaking of the Moon :

"All is dead, motionless, still. Is this verily a blasted world? Has it fallen under the breath of Almighty wrath, coming out scorched and seared?"

The "lesser light" that God declares He made to "rule the night" is set down as a blasted world, and that by a professed Christian! To this end the teaching of modern astronomy tends to "attract" all who receive its dicta, and cannot, therefore, be retained in the same mind with the Bible.

A noteworthy feature of the present day is the fact that many so-called Christian ministers are joining hands with the enemies of the Bible to teach the people that the Old Book is so very unscientific that it can no longer be regarded in the light of a word from God at all.

In the *Christian World Pulpit*, of 14th June, 1893, the Rev. C. F. Aked is reported as saying, at Pembroke Chapel, Liverpool, that :

"No student of science is able to believe that any such flood as that recorded in the early chapters of Genesis ever took place in the history of the human race . . . The Flood story IS A MYTH, 'not history'".

This gentleman has arrived at this conclusion by supposing that science is truth, and he is logically forced to believe that the Bible is a myth. Then what say the avowed enemies of the Book of God? Says the *Freethinker*, of 16th October, 1892 :

"There is something in Christianity calculated to make it hostile to science. Its sacred books are defaced by a puerile cosmogony, and a vast number of physical absurdities; while its whole atmosphere, in the New as well as in the Old Testament, is in the highest degree unscientific."

The Bible gives a false account of the origin of the world; a foolish account of the origin of man; a ridiculous account of the origin of languages. It tells us of a universal flood which never happened. And all these falsities are bound up with essential doctrines, such as the fall of man and the atonement of Christ; with important moral teachings and social regulations. It was therefore inevitable that the Church, deeming itself the divinely-appointed guardian of Revelation, should oppose such sciences as astronomy, geology, and biology, which could not add to the authority of the Scripture, but might very easily weaken it. Falsehood was in possession, and truth was in exile or a prisoner."

This is clinched by the Public Press which teaches people to think. *Reynolds' Newspaper*, of 13th October, 1895, says :

"The most noteworthy feature of the British Association this year is that the assembled savants—representing religion, science, philosophy, politics—have surrendered hands down to views which, if accepted by anyone ten years ago, would be sneered at as a mark of disgrace. The Church has had to give in because geology and biology have been too strong for the Book of Genesis, which is no longer to be accepted as a real account of the Creation, but merely a symbolical one. The incontestable experiments and experiences of the practical scientists have proved that Darwin was right, and that evolution is as certain a law as that of gravitation. What a number of the 'learned' books of a few years ago opposing evolution must now be ignominiously withdrawn from circulation? And how small must the controversial parson and the lay evangelist, who would prove to you in 'two jiffies that science was all bosh,' feel at the thunders of competent scholars! "

While the Press is filled with suchlike articles, the people who do not think for themselves take for granted that science is right, and as a consequence, reject the Bible.

If I were asked to state the main cause of Modern Infidelity, I should say **SCIENTIFIC FALSEHOODS INCULCATED AS TRUTH.**

In the "*Earth Review*" for January, 1893, the following is found :

"HONEST AND NOBLE CONFESSIONS.

When we consider that the advocates of the earth's stationary and central position can account for, and explain the celestial phenomena as accurately, to their own thinking, as we can ours, in addition to which they have the evidence of their senses, and

SCRIPTURE and FACTS in their favour, WHICH WE HAVE NOT; it is not without a show of reason that they maintain the superiority of their system However perfect our theory may appear in our estimation, and however simply and satisfactorily the Newtonian hypothesis may seem to us to account for all the celestial phenomena, yet we are here compelled to admit the astounding truth that, IF OUR PREMISES BE DISPUTED AND OUR FACTS CHALLENGED, THE WHOLE RANGE OF ASTRONOMY DOES NOT CONTAIN THE PROOFS OF ITS OWN ACCURACY.—Dr. Woodhouse, a late Professor of Astronomy at Cambridge."

Those who believe the plain and provable facts of the Bible are set down as lunatics, but the above shows where the lunacy really lies.

John Wesley did not believe in the teachings of the men of the modern astronomical school, although most of his followers do. In his Journal he writes:

"The more I consider them, the more I doubt of all systems of astronomy Even with regard to the distance of the sun from the earth, some affirm it to be only three, and others ninety millions of miles."

In Vol. 3 of the work which records his Journal, "Extracts from the works of Rev. J. Wesley," page 203, the following occurs:

January 1st, 1765.

"This week, I wrote an answer to a warm letter published in the 'London Magazine'; the author whereof is much displeased that I presume to doubt of the modern astronomy. I cannot help it; nay, the more I consider, the more my doubts increase; so that at present I doubt whether any man on earth knows either the distance or the magnitude, I will not say of a fixed star, but of Saturn or Jupiter—yea, of the Sun or Moon."

In Volume 13, page 359, referring again to the subject of theoretical astronomy, he says:

"And so the whole hypothesis of innumerable suns and worlds moving round them vanishes into thin air."

At page 430 of the same volume we find that:

"The planets revolutions we are acquainted with; but who to this day is able regularly to demonstrate either their magnitude or their distance, unless he will prove as is the usual way, *the magnitude from the distance, and the distance from the magnitude?*"

Thus, this admittedly great and good man stands out in bold contrast with many of the present day "reverend" gentlemen. The Bishop of Peterborough is another notable example. He says:

"I have no fear whatever, that the Bible will be found, in the long run, to contain more science than all the theories of philosophers put together."

Let me supplement this remark by stating that the Bible, and the Bible only, is THE scientific book of the Universe. It is the only volume which can be proved true from start to finish. I am not now going into the details of Bible Pyschology, Zoology, History, Philology, Ethnology, and the like. If time and space allowed all these could be proved as true as Bible Astronomy, and every one of them consistent with the facts of Nature, as I have shown Bible Cosmogony to be.

I shall now quote another infidel and reverend gentleman. In the *Christian World Pulpit*, of 29th March, 1893, the Rev. G. St. Clair, F.G.S., of Cardiff, contributes a sermon headed "Where is Heaven?" ; the text being taken from Acts i., 9: "And as they were looking He was taken UP, and a cloud received him out of their sight."

This wolf in shepherd's clothing goes on to say :

"In 1492 Columbus sailed westward in search of the East Indies, and 30 years later Magellan actually sailed away from Europe in one direction and returned in the other, having voyaged all round the world. It was thus shewn that the world is a globe. Previously the common notion had been that the earth was flat, and heaven a little way above the clouds, and the place of the dead—the wicked dead, if not all the dead—somewhere underneath. These were ancient ideas and the fact that we find them in the Bible is one proof that the Bible is an ancient book. The Bible writers had been educated to believe that God had laid foundations for the earth, or supported it on pillars. Heaven was His throne, the earth His footstool."

According to this preacher the Bible writers had been educated to believe a pack of lies. But, as I have already shown, what they believed, and what every consistent Christian believes to-day, is in perfect agreement with the great book of Nature, which lies open to every man who will believe its evidence.

Good advice is given to theologians by Dr. W. B. Carpenter in the "Echo" for 4th May, 1892, as follows :

"If theologians will once bring themselves to look upon nature, or the material universe as the embodiment of the Divine Thought, and the scientific study of nature as the endeavour to discover and apprehend that thought, they will see that it is their duty, instead of holding themselves altogether aloof from the pursuit of science, or stopping short in the search for scientific truth, wherever it points towards a result that seems in discordance with their preformed conceptions, to supply themselves honestly to the study of it, as a revelation of mind and will of the Deity, which is certainly not less authoritative than that which He has made to us through inspired men, and which is fitted to afford its true interpretation."

Moses has been much maligned by modern scientific infidels. The "Muses" of December, 1895, has the following :

"Moses has given his crude ideas as to the age of the world, but modern philosophers and scientists have clearly an equal right to give their deductions and opinions, especially as they produce evidence in which department Moses was very much at a disadvantage."

In the minds of unthinking multitudes science has carried all before it, as the following from Dr. Carpenter's work, "Nature and Man," pages 365 and 366, shows :

"The geological interpretation of the history of the earth has taken the place of the Mosaic Cosmogony in the current belief of educated men, notwithstanding all the denunciations of theological orthodoxy."

The "Agnostic Journal," of 5th January, 1889; shows clearly that it is quite impossible to believe the Bible statements AND Modern Science :

"The account of creation in Genesis is obviously inconsistent with the real facts, both as regards the relations of the earth to the sun, moon, and stars; the crystal vault separating the waters; the manner and order of succession of vegetable and animal life, and numerous other points. It can be defended only on the plea that the inspired revelation was not intended to teach ordinary facts, such as those of astronomy and geology."

"The account of a universal deluge and the destruction of all life, except that of a few pairs of animals preserved and living together for a year in an ark of limited dimensions, from which the earth was re-peopled, involves not only physical impossibilities, but is directly opposed to the most certain conclusions of geological and zoological science."

"The true history of the human race has been the direct contrary of that given by the Bible."

How long will it be ere professed friends of the Bible bestir themselves to read the book of Nature in order to discover whether the Book they profess to believe, because it gives evidence of its Divine Origin, is in accordance with the facts of Nature as we find them to-day?

The creed of the Agnostic—the know-nothing man—is briefly summed up by the "New York Independent" as follows :

"I believe in a chaotic Nebula self-existent Evolver of Heaven and Earth; and in the differentiation of this original homogeneous Mass. Its first-gotton Product which was self-formed into separate worlds, divided into land and water, self-organized into plants and animals, reproduced in like species, further developed into higher orders, and finally refined,

rationalised, and perfected in Man. He descended from the Monkey, ascended to the Philosopher, and sitteth down in the rites and customs of Civilisation under the laws of a developing Sociology. From thence he shall come again, by the disintegration of the culminated Heterogeneousness, back into the original Homogeneousness of Chaos. I believe in the wholly impersonal Absolute, the wholly un-Catholic Church, the Disunion of the Saints, the Survival of the Fittest, the Persistence of Force, the dispersion of the Body, and in Death Everlasting."

Not only is there no room for God in what scientists are pleased to term "Nature," but there is no want of such a Being, as the following from Carpenter's "Nature and Man," page 385, tells:

"The laws of light and gravitation," wrote Mr. Atkinson to Harriot Martineau 30 years ago, 'extend over the universe and explain whole classes of phenomena': this explanation, according to the same writer, is all sufficient, PHILOSOPHY FINDING NO GOD IN NATURE, NOR SEEING THE WANT OF ANY."

"The Earth and its Evidences," of 1st October, 1888, has the following:

"The attempt to harmonise the Mosaic and the modern or professional system of the universe, is plainly to attempt the communion of light with darkness. How often has failure waited on such incongruous unions! But, still, some there are who never seem to recognise the hopelessness of the task. They cannot divest themselves of the idea that science must have been somewhat justified in setting up her authority against that of the scripture records;—that humanity could not be so deceived as to adhere to a system of cosmogony, for more than a century and a half, which has been talked about and read and studied by some of the profoundest of modern thinkers, and to be proved, at last, no better than an old-wives' fable, and as baseless and untrue, from the first line to the last, as if it had been invented by a class of village school children. If modern theories were only partially true, there might have been some consolation in thinking that humanity is doomed to err, and that the foundations of their vaunted science, were based upon facts. But this plea is utterly hopeless, and the very beginning of their complicated system is the most faulty of the whole. They are without excuse; for they deliberately abandoned the only clue given them at the very outset of their inquiry. The first chapter of Genesis supplied them with the outline of the entire system of physical cosmogony. That the earth was *not* a 'planet' was shown by the very first verse in the Bible. The two systems are kept most distinct throughout the whole of the sacred volume. The Almighty never calls himself the God of the sun or of the moon or of the stars; but in innumerable instances does he style himself the 'God of all the earth,' the 'Lord and King of all the earth.' St. Paul declares that 'there are bodies celestial and bodies terrestrial, but

the glory of the celestial is one, and the glory of the terrestrial is another.' This is so emphatically enforced through every page and chapter of the Bible, that to ignore or argue it away, is simply to treat the word of God as a lie from the beginning to the end. If the universe is composed of nothing but planets, then the whole of a house is its roof, and the whole of the sea a dewdrop. All the planets were made on one and the same day, 96 hours after the creation of the earth. Many astronomers wonder why the earth was ever mentioned at all. 'A little insignificant dot of a planet,' about as proportionate in size to the sun, as a honey-bee to a buffalo. And what is their authority for this astounding assertion—this impious contradiction to every word of inspiration? We ask what and who is their authority? Some Smith or Jones or Robinson, that is all! And Christianity has bowed its head in meek submission to these upstart oracles, and treated the Word of God as dung, and with the same contempt that a philosopher would the intelligence of a magpie or a jay!

"Hugh Miller truly said that 'the battle of the evidences will have to be fought on the field of physical science and according to the logic of demonstrable facts.' This is the conflict to which we are fast hastening, this the last great war of opinions, which every day is bringing nearer and nearer to our doors. The issues are most momentous, and as wide as the world in interest and importance. If 'science' wins the day, religion is the greatest bugbear that ever befooled humanity! If, on the other hand, the facts as narrated in the inspired records are infallibly and demonstrably true, then has Christendom been the victim of the most implous and baseless imposture that ignorance and credulity could ever be exposed to.

"Modern science and religion cannot work together! Those who think they can cannot possibly believe or understand either! No man can eat bread and fancy he is drinking water. So no one can believe a single doctrine or dogma of modern astronomy, and accept the Scriptures as a divine revelation. And to teach them, side by side, in our schools and class rooms, is just to instill into the mind of the children that science is far superior to sense, and that falsehood and fraud are more desirable than truth and fact.

"Modern philosophy begins to attack the very first verse in the book of Genesis; and asserts that a pre-Adamite earth existed before the one subsequently referred to; that the seven 'evenings' and seven 'mornings' so accurately and particularly and distinctly specified in that first chapter, were not periods of twice twelve hours, but incalculable ages of time, of which no record exists, and are only made known to us through the laborious deductions of the more than inspired geologist! If this is so, then the 'seventh' day was an age also; and the Jews ought to have observed it, for a thousand years at a stretch! But if they were right in accepting it as a period of only 24 hours, then the remaining six must each have had exactly the same length, and the frantic geologist has to account for his 'stratas' and 'deltas' on some other supposition. It is important and highly necessary that we dwell a little on this, the first point that the modern theorist has assailed. If he can prove that he is right in his conjecture or rather in his positive assertion that days do not mean days, then is the infidel fully justified in laughing to scorn

every other phrase and every other statement, from the first verse to the last in the Bible. And the theologian and the evangelist only expose themselves to derision and pity when they plead for any reverence for a book compiled on such vague and meaningless and delusive principles, and in language which has to be interpreted by pagan astrologers and infidel professors, before we can comprehend what is intended or ought to be understood! If the 'seven days' of Creation's week do not mean just what we understand by seven days, then *all* the Bible is symbolic, and is to be read upside down, and we must believe the very contrary to what is expressed.

"Till *after* the sixth day, all that was done, was not accomplished by any effort of nature, but by the personal agency of the Creator alone.

"Thus it is seen that Moses only begins to speak of Nature, or natural operations, *after* the seventh day. When, therefore, it is said that 'God rested,' it is, by natural implication, affirmed that Nature *began* to work or to act. And it is by losing sight of this most important fact that geology has made too many palpable blunders; and the soundness of that and all collateral sciences, in their very elementary principles, depend entirely on an accurate and distinct appreciation of this grand truth! The modern geologist may just as wisely argue that the five loaves that fed the five thousand, were made from grain that was ever grown in a field, or threshed in a barn, or ground in a mill, or baked in an oven, as to argue that what took place during those actual six days of Creation, was the effect of natural operations or of Nature's laws!

"Lord Bacon, in his 'Confession of Faith,' speaks most soundly upon this subject, as upon most others. He says, 'I believe, that God created the heaven and the earth; and gave unto them constant and perpetual laws, which we call "laws of Nature," but which mean nothing but God's laws of Creation. That the laws of Nature which now remain, and govern inviolably till the end of the world, began to be in force when God rested from his work. That, notwithstanding that God both rested from *creation* since the first Sabbath, yet, nevertheless He doth accomplish and fulfil His divine will in all things, great and small, general and particular, as fully and exactly by providence, as He could do by miracle and new creation; though His working be not now immediate and direct, but by compass and control; not violating nature, which is He hath ordained for His creatures."

The inspired volume declares that :

"The works of the Lord are great, sought out of all them that have pleasure therein."—*Psalms* 111, 2.

We are fully warranted, therefore, in seeking out the of Nature, because when rightly understood, God's declare His wisdom and power. But the infidel with the sole object of getting data for proving the which so strongly testifies against his unrighteous, a myth and a delusion.

In the Book of Genesis it is declared that God created the heaven and the earth, the lights in the heavens, the firmament to keep the waters above it from the waters below it, and in the books that follow, the foundations of the earth and other truths of like import are dealt with. The following passages show that the earth (dry land) is founded on the waters of the mighty deep, and is a motionless stretched-out structure, to which the heavens are parallel. Psalm 24 : 1, 2; 136 : 1-9; 102 : 25; 104 : 1-5; Isaiah 44 : 24; 48 : 13; 42 : 5; Deut. 5 : 8; Zech. 12 : 1; Jeremiah 31 : 35-37; 1 Sam. 2 : 8; Proverbs 3 : 19; 8 : 22-30; Job 9 : 1-10; 38 : 1-11.

The earth has borders which are impassable by man, as Job 26 : 10 declares. See also Psalm 74 : 16, 17.

The movement of the sun over a stationary world is clearly shown in such passages as Psalm 24; Ecc. 1 : 5; Judges 5 : 31; Psalm 19.

That the stars are small is seen by the prophetic utterances of Revelations 6 : 13. If they be worlds many times larger than the earth, how could they fall on it? See Rev. 8 : 10.

Then 1 Corinthians 15 : 40, 41, reminds us that there are terrestrial bodies as well as celestial, which truth the astronomer denies, by making the earth a celestial body :

"There are also celestial bodies and bodies terrestrial, but the glory of the celestial is one and the glory of the terrestrial is another. There is one glory of the sun, and another glory of the moon, and another glory of the stars; for one star differeth from another star in glory."

In Joshua 10 : 12-14 the following language is utterly inconsistent with scientific teaching that the earth moves to cause day and night. If the sun stands still and Joshua commanded it to do what it always does, what an ignorant man he must have been, to be sure? To ask for a miracle to be performed in order that the "course of Nature" might remain as usual? Surely any person can see that it is totally unnecessary to ask the aid of miraculous power to prevent the sun from moving, if it never does move. But I shall let the passage speak for itself:

"Then spake Joshua to the Lord in the day when the Lord delivered up the Amorites before the children of Israel; and he said in the sight of all Israel, 'Sun, stand thou still upon Gibeon; and thou, Moon, in the Valley of Ajalon.' AND THE SUN STOOD STILL, AND THE MOON STAYED, until the people had avenged themselves upon their enemies. . . . So the sun stood still in the midst of heaven, and hasted not to go down about a whole day."

Now, if the story of modern astronomy that the earth revolves and not the sun, be true, the only conclusion that can be arrived at is that the Bible is no better than a child's school book to record such an impossibility, and that, therefore, Joshua and the whole story is a myth. But we know that the sun moves, and we further know that the earth has neither axial nor orbital motion; and we conclude, therefore, that Joshua's command was perfectly consistent with fact and with his faith in the power of God to rule and overrule in His own world. Professor Totten, of Newhaven, in his pamphlet on "Joshua's Long Day," says:

"It is the Bible that Atheists and Infidels attack—the Old Testament chiefly—for they are logical, and perceive that if the foundation goes, the super-structure cannot stand, no matter how eloquently it can be clothed in Agnostic sermons. . . . It will not do to doubt the universality of the Flood, and ask men to accept a Saviour who alludes to it. . . . If the story of Eden and the Deluge, of Jericho and Joshua are myths or fables, and not literal facts, then to the still *rational* mind all that follows them is equally so, and faith, lost in those who foretold his Advent, can never be savingly and logically found again in Christ and his apostles."

These words are true, and show that modern astronomy and the Bible are on either side of an impassible gulf.

The Rev. W. Howard, of Liverpool, however, thinks differently. In his pamphlet "Joshua commanding the Sun to stand still; the miracle explained and defended," he says (*inter alia*):

"Why did not the ocean overflow the land? Run with a pail of water until you come in contact with a wall, and observe the effect upon the liquid, how it will dash over the side: and the sudden stoppage of the rotary motion of *the earth* would naturally send the sea almost all over the dry land. . . . You know the shaking you get with the violent stoppage of an express train going at sixty miles an hour, and we ask you, please, to *fancy* the result to us, and to all cattle, dwelling houses, monuments, and even trees, if the *earth*, which at the equator *moves nearly 1,100 miles an hour*, was brought quickly to a standstill."

"I have now a FIFTH VIEW to lay before you, which appears to be both rational and simple." . . . "My *belief* is this: Joshua and his men having walked all night, as the 9th verse tells us, would be tired next morning, but God caused a great trembling to spread itself amongst the foe, and there was an easy victory. When the war had pursued the Amorites some distance, hailstones fell upon them and did much damage. At the approach to Bethhoron the hailstorm increased in fury; and Joshua, seeing the devastation produced, and being cognisant of the fatigue of his men, *prayed Heaven to let the hurricane go on till total and irreparable disaster was inflicted.*"

This poor man in his ignorance of the Bible and Nature tries to harmonise infidel astronomy with Bible truths, but he utterly fails, as the above quotation shows.

The learned Jewish historian, Josephus, in his "Antiquities of the Jews," Book v., cap. 1, section 17, says:

"Joshua made haste with his whole army to assist them (the Gibeonites), and marching day and night, in the morning he fell upon the enemies as they were going up to the siege; and when he had discomfited them he followed them, and pursued them down to the descent of the hills. The place is called Bethhoron; where he also understood that God assisted them, which He declared by thunder and thunder-bolts, as also by the falling of hail larger than usual. Moreover, it happened that *the day was lengthened* that the night might not come on too soon, and be an obstruction to the zeal of the Hebrews in pursuing their enemies." Now that the day was lengthened at this time, and was longer than ordinary, is expressed in the books laid up in the Temple."

In a note under this paragraph, Mr. Whiston, the learned compiler of Josephus' works, while hesitating what explanation to give the miracle, says:

"The fact itself was mentioned in the Book of Jasher, now lost, Josh. 10: 13, and is confirmed by Isaiah (28: 21), Habakkuk (3: 11), and by the son of Sirach (Eccles. 46: 4). In the 18th Psalm of Solomon, ver. *ult.* it is also said of the luminaries, with relation no doubt to this and the other miraculous standing still and going back, in the days of Joshua and Hezekiah. 'They have not wandered from the day He created them, they have not forsaken their way, from ancient generations, unless it were when God enjoined them (so to do) by the command of his servants.' See Authent. Rec. part I., page 154."

The lights that God made for the use of this the only world, move above it, and in Joshua's long day the God of Creation hearkens to the voice of a man and causes the sun to stand still. *The miracle needs no defending.* IT ONLY NEEDS BELIEVING.

THE BIBLE IS LITERALLY TRUE (except in portions where it is very evident from the context that a symbolical meaning is to be attached to it) and MODERN ASTRONOMY IS ABSOLUTELY FALSE

"Parallax," in his invaluable work "Zetetic Astronomy," says:

"To say that the Scriptures were not intended to teach science truthfully is, in substance, to declare that God himself has stated, and commissioned His prophets to teach, things which are utterly false. Those Newtonian philosophers who still hold that the Sacred Volume is the word of God, are thus placed in a fearful dilemma. How can the two systems co

directly opposite in character, be reconciled. Oil and water alone will not combine.—mix them by violence as we may, they will again separate when allowed to rest. Call oil oil, and water water, and acknowledge them to be distinct in nature and value, but let no "hodge-podge" be attempted, and passed off as a genuine compound of oil and water. Call Scripture the Word of God, the Creator and Ruler of all things, and the Fountain of all Truth; and call the Newtonian or Copernican system of astronomy the word and work of man—of man, too, in his vainest mood—so vain and conceited as not to be content with the direct and simple teachings of his Maker, but must rise up in rebellion, and conjure into existence a fanciful complicated fabric, which being insisted upon as true, creates and necessitates the dark and horrible interrogative—is God a deceiver? Has He spoken direct and unequivocal falsehood? Can we no longer indulge in the beautiful and consoling thought that God's justice, love and truth, are unchanging and reliable as ever! Let Christians at least—for sceptics and atheists may be left out of the question—to whatever division of the Church they belong, look to this matter calmly and earnestly. Let them determine to uproot the deception which has led them to think that they can altogether ignore the plainest astronomical teachings of Scripture, and yet endorse a system to which it is in every sense opposed.

"The following language is quoted as an instance of the manner in which the doctrine of the earth's rotundity and the plurality of worlds interfere with Scriptural teachings:

"The theory of original sin is confuted (by our astronomical and geological knowledge); and I cannot permit the belief, when I know that our world is but a mere speck, a perishable atom in the vast space of creation, that God should select this little spot to descend upon and assume our form, and clothe Himself in our flesh, to become visible to human eyes, to the tiny beings of this comparatively insignificant world. Thus millions of distant worlds, with the beings allotted to them, were to be extirpated and destroyed in consequence of the original sin of Adam.

"No sentiment of the human mind can surely be more derogatory to the divine attributes of the Creator, nor more repugnant to the known economy of the celestial bodies. For in the first place, who is to say among the infinity of worlds, whether Adam was the only creature tempted by Satan and fell, and by his fall involved all the other worlds in his guilt."

"The difficulty experienced by the author of the above remarks is clearly one which can no longer exist when it is seen that the doctrine of a plurality of worlds is an impossibility. That it is an impossibility is shown by the fact that the sun, moon, and stars are very small bodies, and very near to the earth; this fact is proved by actual non-theoretical measurement; this measurement is made on the principle of plane trigonometry; this principle of plane trigonometry is adopted because the earth is experimentally demonstrated to be a plane, and all the base lines employed in the triangulation are horizontal. By the same practical method of reasoning, all the difficulties which upon geological and astronomical grounds have been raised to the literal teaching of the Scriptures may be

completely destroyed. The doctrine that the earth is a globe has been proved, by the most potent evidence which it is possible for the human mind to recognise—that of direct experiment and observation—to be *unconditionally false*. It is not a question of degree, of more or less truth, but of *absolute falsehood*. That of its diurnal and annual motion, and of its being one of an infinite number of revolving spheres, is equally false; and therefore the Scriptures, which negative these notions and teach expressly the reverse, must in their astronomical philosophy at least be *literally true*. In practical science, therefore, atheism and denial of Scriptural teaching and authority have no foundation. If human theories are cast aside, rejected as entirely worthless, and the facts of nature and legitimate reasoning alone relied on, it will be seen that religion and true science are not antagonistic, but are strictly parts of one and the same system of sacred philosophy.

“To the religious mind this matter is most important—it is indeed no less than a sacred question; for it renders complete the evidence that the Jewish and Christian Scriptures are absolutely true, and must have been communicated to mankind by an anterior and supernal Being.

“If, after so many ages of mental struggling, of speculation and trial, of change and counterchange, we have at length discovered that all astronomical theories are false; that the earth is a plane and motionless, and that the various luminaries above it are lights only and not worlds; and that these very facts have been declared and recorded in a work which has been handed down to us from the earliest times—from a time in fact, when mankind had lived so short a period upon the earth that they could not have had sufficient experience to enable them to criticise and doubt, much less to invent and speculate—it follows that whoever dictated and caused such doctrines to be recorded and preserved to all generations must have been superhuman, omniscient, and to the earth and its inhabitants pre-existent. That Being could only be the Creator of the world, and His truth is recorded in the Sacred Writings. The Scriptures—the Bible, therefore—cannot be other than the word and teaching of God. Let it once be seen that such a conclusion is a logical necessity; that the sum of the purely practical evidence which has been collected compels us to acknowledge this, and we find ourselves in possession of a solid and certain foundation for all our future investigations.

“That everything which the Scriptures teach respecting the material world is *literally true* will readily be seen. It is a very popular notion among astronomers that the stellar universe is an endless congeries of systems, of suns and attendant worlds, peopled with sentient beings analogous in the purpose and destiny of their existence to the inhabitants of this earth.

“This doctrine of a plurality of worlds, although it may be admitted to convey most magnificent ideas of the universe, is purely fanciful, and may be compared to some of the ‘dreams of the alchemists’ who laboured with unheard-of patience and *enthusiasm* to discover a ‘philosopher’s stone’ to change all *common metal* into gold and silver; an *elixir vitæ* to prevent and *cure all the disorders* of the human frame; and the ‘universal

solvent' which was deemed necessary to enable them to make all things homogeneous, as preliminary to precipitation, or concretion, into any form desired by the operator. However grand the first two projects might have been in their realisation, it is known that they were never developed in a useful and practical sense. They depended upon the third—the discovery of a solvent which would dissolve everything. The idea was suddenly and most unexpectedly destroyed by a few remarks of a simple but critical observer, who demanded to know what service a substance could be to them which would dissolve all things. Seeing that it would dissolve everything *what would they keep it in!* It would dissolve every vessel wherein they sought to preserve it. The alchemists had never 'given a thought' to such a thing. They were entirely absorbed with the supposed magnitude and grandeur of their purposes. The idea never struck them that their objects involved inconsistency and impossibility; but when it did strike, the blow was so heavy that the whole fraternity of alchemists reeled almost to destruction, and alchemy as a science, rapidly expired. The idea of a 'plurality of worlds' is as grand and romantic as that of the 'universal solvent' and is a natural and reasonable conclusion drawn from the doctrine of the earth's rotundity. It never occurred to the advocates of sphericity and infinity of systems that there was one great and overwhelming necessity at the root of their speculations. The idea never struck them that the convexity of the surface of the earth's standing water required demonstration. The explanation its assumption enabled them to give of natural phenomena was deemed sufficient. At length, however, another 'critical observer'—one a most born' with doubts and criticisms in his heart—determined to examine practically, experimentally, this fundamental necessity.

"The great and theory-destroying fact was quickly discovered that the surface of standing water was perfectly horizontal. Here was another death-blow to the unnatural ideas and speculations of pseudo-philosophers.

"Just as the 'universal solvent' could not be preserved or manipulated, and therefore the whole system of alchemy died away, so the necessary proof of convexity in the waters of the earth *could not be found*, and therefore the doctrine of rotundity and of the plurality of worlds must also die. Its death is now merely a question of time."

APPENDIX.

THE EARTH AN IRREGULAR PLANE.

By WILLIAM THOMAS WISEMAN, F.R.G.S., &c.

The surface of all water, when not agitated by natural causes, such as winds, tides, earthquakes, &c., is perfectly level. The sense of sight *proves* this to every unprejudiced and reasonable mind. Can any so-called scientist, who teaches that the earth is a whirling globe, take a heap of liquid water, whirl it round, and so make rotundity? He cannot. Therefore it is utterly impossible to prove that an ocean is a whirling rotund section of a globular earth, rushing through "space" at the lying-given-rate of false philosophers.

When a youth, I stood upon the Dover shore of the English Channel, and was told to watch a departing ship. "See! There she goes; down, down, down! The hull has disappeared! She is out of sight! Now, my boy, you have had an ocular demonstration that the world is round (meaning globular in shape), and SEEING IS BELIEVING." I walked up to an "old salt" who had a telescope, and said: "Can you see that big ship through your glass that's gone down the Channel, and is now out of sight?" "Yes, my son. Look!" The big ship immediately came into view again, as I peered through the sailor's glass! "Why! my —— told me the earth was round, because that ship I can now see had turned down over the horizon!" "Aha! aha! sonny, I know they all says it! Now, I have been all over the world, but I never believed it. But, then, I have no learning, only my senses to rely upon, and I says SEEING IS BELIEVING."

I now, after many years, endorse the old sailor's experience, that the world is not a globe, and I have never found the man who could prove by any practical demonstration that he, or I, are living on a whirling ball of earth and water!

law does the *dense* earth and the *rare* air rush round together
 Declare, ye scientists, IF YOU KNOW ! The Scriptures =
 God's inspired Prophets contradict the unreasonable
 illogical, unscientific delusion, and false philosophy, that *the*
fixed earth is a hollow fireball with *several* motions !

*" There is an old adage, by which you can fix them,
 There is not one lie true, no, not if you pick them."*

EVOLUTION.

When grovelling minds of little worth
 Forsake the Lord of heaven and earth,
 What dreams of fancy they imbibe ;
 They claim as kin the monkey tribe.
 They set all history at defiance
 And call their speculations science,
 Then try to shew the wondrous plan
 Of how the ape became a man.

All things to God men used to trace,
 And every species kept its place.
 But now we're told that men and worms
 Have only sprung from lower forms ;
 And when proud science lends her aid
 They'll tell us how these forms were made ;
 This thought is theirs—O happy notion !
 " Mind is but matter put in motion."

In works of art they see design,
 And own that wisdom did combine ;
 They say you may behold it in
 A watch, a mouse-trap, or a pin ;
 But all the flowers that scent the breeze,
 The fruits that grow upon the trees,
 The wondrous form and powers of man,
 Arose, they say, *without* a plan.

If science shews that man escapes
 And leaves the ranks of grizzly apes ;
 Then science may reverse the plan
 And prove the ape a fallen man.
 And this new species yet may boast
 And gain the tails their fathers lost ;
 As matter moves and beauty withers,
 Time yet may class them with their fathers.

No God they see in all creation ;
 They spurn the thought with indignation,
 Their main pursuit in life is pelf ;
 Their creed is—" *Always mind yourself.*"
 They say to saint and sage and ruffian—
 " The future state is but a coffin ;
 And when we pass beyond life's storms,
 We hope to be devoured by worms."

O charming hope for which they wait !
 What glory gilds their future state !
 If here they do but little good,
 Yet after death they're used as food.
 Then let this glowing prospect cheer,
 Take care of self while you are here,
 Grow fat and plump till latest breath,
 And you'll be useful after death.

D. S.

From the "Christian Commonwealth," Jan. 25th, 1894.

THE NEW SCRIPTURES.

ACCORDING TO TYNDALL, HUXLEY, SPENCER AND DARWIN.

1. Primarily the Unknowable moved upon comos and evolved protoplasm.

2. And protoplasm was inorganic and undifferentiated, containing all things in potential energy ; and a spirit of evolution moved upon the fluid mass.

3. And the Unknowable said, " Let atoms attract" ;
and their contact begat light, heat, and electricity.

W

4. And the Unconditioned differentiated the atoms, each after its kind; and their combinations begat rock, air, and water.

5. And there went out a spirit of evolution from the Unconditioned, and working in protoplasm by accretion and absorption, produced the organic cell.

6. And cell, by nutrition, evolved primordial germ, and germ developed protogene; and protogene began eozoon, and eozoon begat monad, and monad begat animalcule.

7. And animalcule begat ephemera; then began creeping things to multiply on the face of the earth.

8. And earthly atoms in vegetable protoplasm begat the molecule, and thence came all grass and every herb in the earth.

9. And animalcule in the water evolved fins, tails, claws, and scales; and in the air, wings and beaks; and on the land they sprouted such organs as were necessary, as played upon by the environment.

10. And by accretion and absorption came the radiata and mollusca, and mollusca begat articulata, and articulata begat vertebrata.

11. Now these are the generations of the higher vertebrata, in the cosmic period when the Unknowable evolved the bipedal mammalia.

12. And every man of the earth, while he was yet a monkey, and the horse while he was a hipparion, and the hipparion before he was an oredon.

13. Out of the ascidian came the amphibian and begat the pentadactyle; and the pentadactyle, by inheritance and selection, produced the hylobate, from which the simiadæ in all their tribes.

14. And out of the simiadæ the lemur prevailed above his fellows, and produced the platyrhine monkey.

15. And the platyrhine begat the catterhine, and the catterhine monkey begat the anthropoid ape, and the ape begat the longimanous orang, and the orang begat the chimpanzee, and the chimpanzee evolved the *what-is-it*!

16. And the *what-is-it* went to the land of Nod, and took him a wife of the longimanous gibbons.

17. And in process of the cosmic period were born unto them and their children, the anthropomorphic primordial types.

18. The homunsulus, the prognathus, the troglodyte, the autochthon, the tarragen, these are the generations of primeval man.

19. And primeval man was naked and not ashamed, but lived in quadrumanus innocence, and struggled mightily to harmonise with the environment.

20. And by inheritance and natural selections did he progress from the stable and homogeneous to the complex and heterogeneous; for the weakest died and the strongest grew and multiplied.

21. And man grew a thumb; for that he had need of it, and developed capacities for prey.

22. For, behold the swiftest men caught the most animals, and the swiftest animals got away from the most men; wherefore the slow animals were eaten and the slow men starved to death.

23. And as types were differentiated the weaker types continually disappeared.

24. And the earth was filled with violence; for man strove with man, and tribe with tribe, whereby they killed off the weak and foolish, and secured the survival of the fittest.

From the "Rainbow," and copied from an American Journal.

TRUTH WILL CONQUER.

DEDICATED TO THE MEMBERS OF THE CHURCH CONGRESS, HELD AT
NORWICH, 1895.

"Ah, man!

You are so great—too great for this small world,
For you have 'proved' that Christ is all a lie!
The Gospel that He taught us but a 'MYTH,'
The Bible but a pack of legends, old

And false traditions—you can prove it. Ay,
You are so wise. O vain, presumptuous man,
You love to think the 'Word of God' is false,
And hope to mar its beauty with your sneers.
Rail on; God's citadel shall never fall to you,
Smite as you may.

Ah, 'Science,' SOURCE OF INFIDELITY,
You blazon great discoveries to the world,
Fresh wonders brought to light by such as you,

Revealing Nature's 'laws' (*we* call them God's),
 Proving all things exist by hidden sacred laws,
 And, adding pride to folly, call them '*chance*.'
 Fool! God has made those laws, and set the sun
 And all the planets daily to perform
 Their wondrous course, through endless æons on,
 From cycle unto cycle, ne'er to cease,
 Do ye not know that what has been *shall be*,
 That nought is new, nought underneath the sun,
 As said the King of Wisdom—Solomon?
 But, ye, the more ye search, new wonders find.
 And newer wonders, till the less ye love
 The Wonder-Maker, All Creating God.
 Why is it thus? and why does Wisdom (?) turn
 Your heart from God, when He all Wisdom is?
 But ye will rave in your demented pride,
 Wise in the worldly wisdom of the world,
 Wise in your darling theories—so false
 To sense, or truth, or manly, honest doubt
 Ye know so much, and yet one little child,
 In her sweet faith, is wiser than ye all,
 And nearer unto God. And ye would force
 Your base *opinions* on the ears of men,
 And bid them hearken to your hollow words!
 Leading the blind with your phantasmal talk,
 Yourselves more blind than they, more dull your sense;
 False prophets, fools, to kick against the pricks
 As did the bigot Pharisees of old!
 But ye may rave; think ye that truth will fail?
 Think ye with puny breath to blast the Rock
 That has stood firm for nineteen hundred years
 Against the sceptic's scorn, the mocker's laugh,
 And borne the brunt of Infidelic sneer
 Immutable, in majesty supreme?
 Watching you beat yourselves to death upon it!
 We fear not: do your worst. *Right* conquers *Might*.
 And God's great *Truth must* conquer in the end!"

JOHN MERRIN.

THE GLORY OF GOD.

The inspired Psalmist says that "The heavens declare the glory of God; and the firmament showeth his handiwork"; therefore, whatever some professed Christians affirm to the contrary, the subject of Creation is connected with right views of God, His worship, and His glory. But if we would have a right conception of God, and His glory, we must see to it that we have a right conception of His work in Creation. How, for instance, do we obtain an insight into the character of any great man, whether he be a poet, politician, sculptor, general or king? Is it not by his acts, or his works? But suppose these acts, or works, are misrepresented to us, or defaced by someone, should we not have false and distorted views respecting the author, artist, or the maker of those things? Assuredly. And so it comes to pass in respect to the construction of the world, false views of the universe have led men into a misconception respecting the character of God, and even alas! in many cases to a denial of the very existence of such a personal Being.

Let us, then, endeavour to come back to first principles. The world exists, and must have come from somewhere. It is "unthinkable" to say it came by chance, or any "fortuitous concourse of atoms." Its wonderful variety, the general co-relation and adaptability of its various parts, and the exact and never-failing motions of all the heavenly bodies, *prove*, to any well-balanced and unprejudiced mind, that some grand and controlling intelligence directs and rules over all. As the apostle Paul declares, "The invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead: so that they are without excuse." Rom. i., 20.

A grand truth lies in this statement of the apostle. Paul was no fool. It is allowed on all sides, alike by friend and foe, Sceptic and Christian, M. Renan and the Archbishop of Canterbury, that no one man has had more influence in forming Christianity, the history of which has for eighteen centuries been making the history of the civilised world, than the apostle Paul. His name will be had in honour when the names of the adversaries of the truth will have sunk into merited and everlasting oblivion. And this great man agrees with the Psalmist in teaching that the Creation, as set forth in the Bible, and as found in what some call "Nature," sets forth unmistakably the grand truth that God IS. Now, this is a fundamental verity, and the foundation of all true faith.

GOD IS. And "he that cometh to God must believe that He IS, and that He is a rewarder of them that diligently seek Him." Now, this faith is, on the one hand, neither an unreasoning credulity, nor, on the other hand, is it a bigoted *disbelief*. It is based on an intelligent and reasonable understanding of the things that are seen above and around us.

The Book of Nature is open to all men; but it must be read and studied without prejudice and without philosophical bias. We must come to it like little children, with the honest desire to know the truth, and not attempt to read into it our own, nor anyone else's, plausible or implausible hypotheses. If we do this patiently and persistently, we shall be "rewarded"; the grand and ineffaceable truth will dawn upon us that GOD IS.

We shall see His glory in the bright and blazing sun as he goes forth majestically, like a giant to run his daily course. We shall own *His* Power and Godhead when the moon, queen of the night, rises in quiet and stately splendour, to reflect her silver radiance in every rippling stream. And we shall confess *His* wisdom and unfailing skill when, at night, we gaze up into the firmament and behold ten thousand glittering gems, shining in matchless beauty, and shedding upon the earth their silent influences, as they nightly perform their appointed revolutions. Truly we shall then confess with the Psalmist, that "the heavens declare the glory of God, and the firmament sheweth His handiwork."

"The firmament sheweth His handiwork." That vast and incomparable structure which spans the heavens, and covers the earth with its capacious dome, divides the waters which are "above" the firmament from the waters which are "under" the firmament. And when we realize something of the tremendous size of this tent-like covering, spanning with one mighty arch across the whole of the outstretched earth; when we consider its weight, its strength, its stability, and the avowed purpose for which it was made by the Creator, we can unhesitatingly and devoutly again exclaim with the Psalmist, "The firmament sheweth His handiwork." No wonder such a "work" occupied the whole of one day, the third, in the "great and marvellous" work of the six days Creation. Job, one of the finest, and certainly one of the most ancient, of true philosophers, when comparing the works of God with the puny works of man, asks: "Hast thou with Him spread out the sky, which is strong, and as a molten looking-glass?"

Job 37 : 18. It is, perhaps, this mirror-like quality which the firmament possesses that makes unbelieving "scientists" think that they can, with their glasses, peer into what they call "space," which they affirm to be "boundless." As well might a child, gazing upon the bosom of a glassy lake, affirm that it had no bottom, and that the sky and clouds, reflected from its placid surface, were slumbering in the unfathomed depths below, and not above, its waters.

The idea of illimitable "space," filled with an infinity of revolving worlds or globes, is not only a bewildering idea, unfounded on fact, but it directly tends to remove the Creator, or rather the idea of a Creator, far, and farther, away from this earthly plane of ours. It necessarily and logically leads to Atheism; and too often, alas! it practically leads men there. The idea of Heaven as a place, the abode of The Eternal, becomes to the logical and thinking Newtonian a *myth*; and God, if he acknowledge such a personal Being at all, becomes farther and farther removed from the scene of all earthly operations. Whereas the Saviour of the World, who "came down from Heaven," to do his Father's will, taught His disciples to believe that Heaven was not very far off; that it was directly and always "above" us; that God was concerned in the work of His hands; and that as "our Father," He was near enough to hear the prayers of all those who call upon him in sincerity and truth. This is assuring: this is comforting. God cares for the world; and He will punish those who afflict mankind with their selfishness, their greed, their falsehoods, and their oppressions. Yea, God has "so loved the world"—not the "globe," as some misguided Christians have lately printed and perverted this sublime text with a ridiculous "globe" stamped on the paper—God "so loved the world that He gave His only begotten Son, that whosoever believeth in Him should not perish but have everlasting life." This, we say, is comforting. It is assuring. But, on the astronomical hypothesis, the world is like an uncared-for orphan, or a desolate wanderer: God is removed too far from us to be of any practical use; and the idea of Heaven is so vague, that such a place, if it exist at all, may be anywhere or nowhere; "all round the globe;" or spirited away from us altogether, "beyond the bounds of time and space." Thus the Christian's hope is undermined, and his faith is eaten away at the very core by this insidious and so-called "scientific" worm. This is most calamitous; yet even some of our "spiritual guides" are either so false to their professions, or are so

deceived themselves, that they cry out, "It does not matter what shape the earth is; we don't care whether it be round or flat, square or oblong, so long as"—yes, so long as they get a good "living," and hold a respectable position in society? Is this it? Such a confession really means, when put into plain language: We do not care whether the Bible be true or false, in its record of Creation, so long as our interests or our hope of "Salvation" is assured. But "woe" is pronounced against such easy going shepherds of Israel. "Woe" to them who are leaving their flocks to become a prey to the devouring wolves of "Science," "falsely so called," as the great apostle intimates. Let us be on our guard. There are honourable exceptions to such false shepherds and teachers, and others are being raised up to warn us. We have quoted some of their noble testimonies. Let us give heed to these needful warnings. God has never left Himself without witnesses to His Truth whether in Nature or in Revelation. We may shew this, if the Lord permit, more fully another time as regards Creation truth.

In conclusion, we would call the attention of all our readers to the seasonable warning given us by the Apostle Paul, where he says, "Beware lest any man spoil you through *philosophy* and vain deceit, after the tradition of men, after the rudiments of the world, and *not after CHRIST*." Col. 2 : 8. And again, Let us "prove all things; and hold fast that which is good."

"ZETETES."

HOW OLD IS THE EARTH.

By ALEX. MCINNES.

A squabble over the earth's age lately broke out between Lord Kelvin, styled by Earl Salisbury, "the greatest of living scientists," and a Professor Perry, who disputed the infallibility of his chief. The scientific lord, formerly William Thomson, assumed, or as usual supposed, that the earth is a "homogeneous body," cooling at a fixed and uniform rate; therefore, that its age is somewhere between 20 millions and 400 million years. However, the lordly dictator having *published his supposition*, larded over with mystical mathe-

matics, also in words of thundering sound, what multitudes of simpletons will now gulp down the bolus without ever asking for the evidence so wholly wanting. Now, is a university professor so blind as not to see the enormous difference between 20 millions and 400 millions—viz., 380 millions, to count which at the rate of 60 per minute, 12 hours daily, would occupy 24 years of a man's life? Then, why call the vast continents making up the land or earth a body, seeing that they have neither head, legs, nor any such members; and why a body any more than a soul? But, if by earth is meant all the oceans and continents rolled together into an astronomer's imaginary globe, land being solid and ocean fluid, where is the homogeneity? *En passant*, this misuse of the words body and earth are but specimens of the wholesale verbal jugglery practised by scientists to cause mental confusion and darkness. Moreover the Glasgow professor to make the earth's age what he pleases has only to assume the rate of cooling accordingly. Yet the 400 million years being too paltry a period for the evolution fable, Professor Perry rejects the supposition of cooling, and assumes that the earth's centre is now in a highly molten state, and with as much confidence as if he had been down in the infernal regions making a personal inspection, whilst Lord Kelvin assumes a familiarity with the earth's primeval conditions as if he had witnessed the Creation.

Is not the fabulous chronology after all like the ocean-land-globe, a mere heirloom of ancient heathendom? The Japanese and Chinese to make chronology square with their abominable Buddhism suppose 3 million years for the earth's duration, the Hindoos for Brahminism 6 millions; and now Professor Thomson, to please the atheistic evolutionists, is even willing to grant 4,000 million years as the greater limit, thereby confessing a blunder of 3,600 millions!

Further, the scientists can see nothing to admire beyond or above what they call nature, that is, the visible Creation, which by *their assumption* is its own Creator—having had an eternity of ages to evolve sun, moon, stars, oceans, and continents out of an *imaginary* fiery gas—a god unaccounted for; life out of death; order, beauty, light out of darkness and chaos; many thousand kinds of plants out of granite; thousands of kinds of beasts, birds, fishes, insects, out of cabbages, trees, &c., and man out of no one knows which kind of monkey! Still this goddess Nature is confessed to be as helpless as the puppet of a punch and judy show, being entirely dependent on mythical laws which act with an

energy too omnipotent for Nature to resist, and she is pulled, whirled, tossed, evolved, exploded, just as these mythical laws please. Again, the laws themselves are under a necessity of operating according to rules, fixed how, why or when, no one knows; yea, unchangeable, at least, since tadpoles grew out of cabbages to father our ancestral apes, gorillas, or baboons. *But whence the INVOLUTION that must have PRECEDED the EVOLUTION* is another nut too hard for scientists to crack!

Is it hard with such cunning fables to deceive the multitudes so debased by the lying stories and abominable idle gossip of newspapers and like literature? And though foolish editors may jest at Moses, yet the Pentateuch still stands the oldest historical monument, so well authenticated and so full of unassailable internal evidence—so plainly endorsed by Jesus, whose well-attested Christhood no lover of truth can deny. With the date of Creation given in Genesis, as well as the Patriarch's ages, along with periods of time given by the sacred Hebrew historians following Moses, we may calculate down to the first year of Cyrus, where we are assisted by Josephus and Greek historians, thereafter by an unbroken chain of literature down to the present year, eclipse and transit cycles confirming all. Hence we know that about 6,000 years ago, God said, "Let there be," and there was.

In Dr. Dick's "Natural History" we have a specimen of the Geological method of calculating. He *supposes*, of course without any proof whatever, that God did not make the bed of the Niagara, but that that river cut for itself the passage of six miles below the falls; and further *supposing* the Niagara to cut one foot yearly, he concludes it must have been so working for 31,000 years, but if it cuts, as others *suppose*, one inch yearly, we have more than 300,000 years as the present or quartary period. Next he *supposes*, still without proof, that the underlying systems, the tertiary, secondary, primary, primordial rocks, represent as many antecedent periods of time. So, the quartary being 500 feet thick, and the tertiary 3,000 feet, we have six times 31,000 years or six times 300,000 years to add for the earth's duration. Again, the thickness of the secondary rocks being 15,000 feet their period must be 30 times that of the present; whilst the thickness of the primary is three times, and that of the primordial five times that of the secondary. *Therefore*, the earth's age is somewhere between $8\frac{1}{2}$ millions and about 100 million years; without taking into account

ie unknown period of the igneous rocks. However, we now from Genesis 1 that God made all things in six days, all the rocks on the third day, in strata according to Job xxviii. 5 ; therefore, granting the Niagara to cut one inch early it must since the creation have worn away only ,000 inches or 50 feet.

Accordingly, shall we compute the earth's age by the age and contradictory guesses of fellow worms called eologists, or by the authority of the Creator Himself?

EVOLUTION—WHAT DOES IT MEAN?

One school in attempting to bridge o'er the chasm,
Invented the germinal cell "Protoplasm,"
Which was first *inorganic*, but afterwards seen
To grow into "Sponges" and "Polyps" marine;
From thence by "Absorption," "Accretion," and
growth,

Giving birth to the "Bivalves" or "Molluscs," or
both.

These creatures by striving grew fins, tails and claws,
In spite of Dame Nature's implacable laws.
They sprouted and turned into reptiles amphibious;
Of obstacles placed in the way quite oblivious.
Urged on by "Necessity" upwards they grew,
Day by day giving birth to some quadruped new,
Evolving, re-forming without intermission
"As played upon by the surrounding condition."
Then "Like produced *un* like" without hesitation,
Earthy atom transformed into rich vegetation.
Animalculæ left their aquatic abode,
And into the Forests by thousands they strode.
Frogs changed into birds at the voice of the Sirens,
And everything living "changed with their environs."
The Lichens from every restriction then broke,
And evolved both the *Lepidodendron** and Oak.
'Twas a wonderful time and a wonderful sight
To see how each day brought new objects to light.
The stratified rock the strange story relates,
How the "Invertebrata"* begat Vertebrates;
And the "Ichthyosaurus"* one night in a freak,
Gave birth to the "Mastodon"*—(minus the beak),

While the tidy Acidian evolved from the Oyster,
 Emerging somewhat like a monk from his cloister
 The Bear from the Mole in the past we descry,
 While the Bumble Bee came "by descent" from
 the Fly.

Then the Lemur begat the grim Ape Catarrhine,
 From thence came the others "in process of time."
 Their tails being "chaffed," became shortened,
 'till soon

We arrive at the hairy-faced, tail-less Baboon.
 These quarrelled and fought in the Forests primeval,
 Impelled by an inherent spirit of evil.

The Pentadactilians ignoring all trammels,
 Produced the most curious Terrestrial Mammals ;
 While the Porpoise and Sea-Horse plunged into
 the deep,

Determined henceforward to water to keep.
 "By the use and disuse" of their parts, as it suited,
 They wandered (to no spot particular rooted),
 One half the world took with the other to strive,
 'Till naught but the "Fittest" were found to
 "Survive."

At last Man appeared ; but, amazingly strange !
 From that moment the animals never could change.
 "Like" at last "produced like," and the laws
 became fixed,
 Which explains why the Species since never got
 mixed.

J. W. H.

From "The Anti-Infidel," March, 1887.

* These are fossil animals and plants.

OUR EARTH MOTIONLESS.

DEFINITE CONCLUSIONS OF SCIENCE.

A Popular Lecture proving that our Earth neither rotates upon its axis nor around the Sun.—Delivered at BERLIN by DR. SCHOEFFER.

GENTLEMEN,—One should be endowed with unlimited courage to dare come out before a large audience with proofs of the erroneousness of a scientific formula which since our earliest youth we had been taught to regard as the only correct and unerring theory. I am pretty certain that at this moment you have come to the same conclusion about me, as four months ago, I would have entertained myself of any man who should have asserted that it is not the earth which revolves around the sun, but the sun which revolves around the earth. I would have considered such a man either an ignoramus or a lunatic; nevertheless, I now consider the immobility of the earth an incontrovertible fact, and even hope that my convictions will be shared by those who without prejudice will reflect upon that which I will now impart to them.

Some time ago we had the opportunity of witnessing the series of experiments with a pendulum which, according to the theory of the celebrated physicist, Leon Foucault, furnish proof of the diurnal rotation of the earth around its axis. I had long neglected to acquaint myself with these experiments, although, while explaining to my pupils the motion of the earth around the sun, I had always found very extraordinary results—absurd, I ought to say—one circumstance pertaining to this motion with which you will acquaint yourselves in my present lecture. So firm was my conviction of the diurnal and annual revolutions of our globe (earth?) that I had accepted even Foucault's experiments with the pendulum as sufficiently demonstrative.

Meanwhile, I had been appointed to assist in the experiments, and, as they bear directly upon the subject in hand, I will briefly state in substance the results.

If, choosing any given point in space near our globe, we imagine a limitless series of circles, then, in consequence of their parallel position to the equator, we term such series of circles parallels.

From the exterior form of the earth we conclude that these circles go on diminishing as they near the poles. If we fancy two such circumterrestrial parallels as dividing this auditorium, then the northern parallel will be shorter

than the southern. In the rotation of the earth around its axis in 24 hours both parallels will have to accomplish the rotation in the same space of time; and as they complete the circuit simultaneously, but the southern parallel is longer than the northern, then, consequently, every point of the southern parallel must move with greater velocity than the like points of the northern.

Let us now throw a glance on the apparatus called the pendulum, which is well-known to every one, but in the particular case in point a very equivocal authority. It is easy to demonstrate that the arc of the vibration of the pendulum does not depend upon the change (Drehung) of the point of suspension. This undisturbed regularity of the vibration of the pendulum has served M. Leon Foucault as a proof of the rotation of the earth around its axis. If we cause such a pendulum to vibrate across the parallels which we are imagining to pass through our audience, then the arc of the vibration, as Foucault tells us will (not) change from the axial rotation of the emplacement, and will begin, in consequence of this, to gain in rapidity on the northern and less rapidly moving parallel, and will be out-stripped by the southern one, which moves quicker. In such a case, the arc of the pendulum will soon diverge from its direction from north to south, and its point turned to the north will near the east, and with the point turned south will begin more and more to near the west, till, finally, the pendulum will change its motion in the direction from east to west.

Now the reason for a deviation of the pendulum has ceased; it vibrates no more across two parallels, but only across one. The cause of its deviation from its first direction is removed; it would then seem that the deviation itself ought not to take place any longer, but nevertheless it still continues. The pendulum abandons the east and west direction to approach with its points the southeast and northwest until it reaches its starting point, at which it must again deviate according to Foucault's theory.

As the pendulum does not preserve the direction from east to west, but always gets farther and farther away, I conclude that the deviation of the pendulum is not caused by the axial motion of the earth, but is due to some other motion yet unknown.

By a series of careful experiments I have found that all pendulums are not liable to a deviation in the same degree; the heavier the ball, the more rapidly it will deviate. And *as the rotation of the earth around its axis*—if we admit its

existence—ought to be manifested everywhere equally, then its deviation also, for every kind of pendulum, must be equal in time; but this in reality is just what is not the case.

The conviction that Foucault's arguments were erroneous forced me to verify at the same time all other proofs which have hitherto been regarded as demonstrating the rotation of the earth around its axis, and it was then I found that we had no evidence for such a theory.

Already in antiquity Aristarchus of Samos and other philosophers, several centuries before Christ, affirmed that the stellar sphere is motionless, and that the daily rising and setting of the stars can only be accounted for on the theory of the earth's rotation around its axis. But all these men, profound thinkers, had come to the above conclusion only from the fact that otherwise such an incredible rapidity of the celestial bodies as would enable them to accomplish a diurnal circuit around the earth could never be accounted for. Of course every one must agree with me that at the present moment such an argument would be regarded as very small proof. Indeed, if we were able to take a little peasant boy from a country in which railroads were unknown and tell him of the existence of carriages which are able to make a mile in five minutes, of course he could never believe us; such rapidity would seem incredible to him. He is ignorant that light travels with a velocity of 40,000 miles a second, and that the rapidity of electricity is still more considerable! Thus, this argument with respect to the celestial bodies whose nature is as yet so little understood, and the path of whose motion is a vacuum or in a space filled with attenuated matter is only assumed or guessed at upon the strength of an hypothesis—that these bodies cannot have such a velocity of motion as to be able in twenty-four hours to circumscribe the earth—such an argument, to make us reject the possibility of the rotation of the celestial sphere, is certainly weak and futile.

But the contrary position, the one commonly accepted, also proves untenable when we look into it carefully.

It was found in the measurement of the earthly meridians that the globe is flattened towards the poles, and that in consequence of this, the equatorial diameter is greater than the line which passes through the axis of the earth from one pole to the other. Man, who endeavours to penetrate into all the mysteries of nature, tried to find the reason for such a flatness, and then comes Newton and explains it by the rotatory motion of the globe. In consequence of such a

rotation all the component parts of the earth, and especially the bodies to be found upon its surface, receive an impulse to abandon the earth. Such an impulse is then named the centrifugal force.

At the poles, where the rapidity of motion is equal to 0, that force is also equal to 0; further from the poles to the equator that force increases in ratio with the increase of the parallels, so that the greater the parallel is, the more rapidly as I have already said, must move each of its points. In consequence of this, they say, the greater part of the earth's mass is gravitating toward the equator; and for the same reason, the centripetal force, acting on the equator with greater intensity, compels the concentration there of the greater portion of the mass. Hence it is finally concluded that the earth must forcibly rotate around its axis, because were there no such rotation there would be no centrifugal force, and without such a force there would exist no gravitation toward the equatorial diameter or zone.

We have laid before you now one of the existing evidences of the rotation of the earth. I do not accept such an argument, but reject it with many other scientists who have discarded it before myself. . . .

Therefore, gentlemen, until we have more weighty argument to explain satisfactorily the accumulation of the mass of the earthy matter on the warmer zones, I cannot undertake to accept as a reason for it a certain centrifugal force, appearing as a consequence of the motion of the earth around its axis, and I will not allow the hypothesis, were it but because I know beforehand to what inexplicable contradictions this centrifugal force would bring us. Some of these I will point out presently.

We must now consider the fourth and last evidence of the rotary movement of the terrestrial globe.

In 1867, M. Richer remarked that a clock of his, which kept good time in Paris, having been transferred to Cayenne, *i.e.*, five degrees north of the equator, began to lose two and a half minutes daily. Richer had to shorten the rod of the pendulum one and a quarter lines to make the clock go right. It is well-known that the time of the vibration or rapidity of a pendulum increases with the diminution of its length, and is arrested proportionately with the elongation of the rod. Later it was ascertained that such a retardation happens also when the clock is carried on a high mountain. As the *vibration* of the pendulum is based on the laws of falling *bodies*, and the fall of the bodies itself depends on their weight

or otherwise, on the attraction of the earth (!) it was but natural to conclude that if the vibration of the pendulum is not the same everywhere, and the attraction of the earth varies, then this affords us conclusive evidence that the cause of the retardation of the vibrations of the pendulum is a certain centrifugal force, which develops with the motion of the earth around its axis, and that it is this force, which arrests the swing of the pendulum by decreasing its weight. But such a conclusion is erroneous; and we could far better admit the following conclusion, at which many of our physicists now have arrived—the attraction of the earth diminishes with the recession of the body from its centre, which serves at the same time as the centre for all the attractive force of the globe.

And what if the cause of the retardation of the vibrations of the pendulum at the equator and on high mountains should prove quite different from what is now generally supposed? What if the cause is not at all the decrease of the force of attraction (whether from the recession of the object from the centre of the earth or centrifugal force), but on the contrary, its increase, proceeding from the accumulation of bulk at the equator, in which case the force of attraction increasing, increases at the same time the weight of the body, and in the pendulum the weight of the ball? There is one fact not known to all physicists, I believe, namely, that the rapidity of the vibrations of a pendulum depends not only on the length of its rod, but also on the weight of the ball itself. It might be even more correct to express it thus; the velocity of the motion of the pendulum depends chiefly on the weight of its ball. When I elongate the rod of the pendulum I force the ball to move on a longer level, and increase thereby its own weight; I can also, without elongating the rod, increase its weight by other means; the result will be the same. Thus, for instance, everyone is aware that even people unacquainted with science, when their clocks are running too fast, and they wish to make the pendulum vibrate slower, attach to the ball either a stone or a small bit of iron, and thus attain their object. The physicists have made very exact experiments in this direction. They found that a pendulum having a uniform length of rod makes 20,000 vibrations—

With a ball attached to it weighing 2 k.g. in	1,977 seconds.
" " " 4 " "	2,010'55 "
" " " 6 " "	2,021'31 "
" " " 8 " "	2,027'04 "

Therefore the greater weight of the ball the slower the vibration of the pendulum. From these experiments, conducted with the greatest precautions and published in the "*Comptes Rendus de l'Academie Francaise*," tome xxi., p.p. 117-134, it appears: 1. That the laws of Galileo are not quite exact as to the vibrations of the pendulum; 2. That the explanation of the retardation of the pendulum on the equator by the decrease of the force of attraction of the earth is evidently false; 3. That even the universally accepted laws of the gravitation of bodies are not sufficiently exact; and 4. That, in general, the means employed toward discovering the laws of nature with the help of calculations is not only being proved unreliable, but it serves but the more to darken the truth.

You will have seen from the last two arguments, which have hitherto served as evidence of the rotation of the earth, that as the result of such a rotation was assumed a centrifugal force. Its presence was vainly sought for in the currents of the ocean, as well as in those of the air. And, indeed, it is not easy to explain how or on what principle the air—this soft, yielding incompressible body, agitated by various currents—could have remained unaffected by the rotation of the terrestrial globe. If the greatest physicists admit that hard bodies are influenced by such a rotation, then it appears, it will not be too bold on my part to maintain that the rotation of the earth around its axis should inevitably exert an influence on the air. This influence should be shown first of all in that, during the rotation of the earth from west to east, there would appear immediately an atmospheric current from east to west.

Indeed, if the earth, together with its atmosphere, rotates in a completely empty space, then in every case it might be possible to admit that the earth rotates without producing any influence on the atmospheric ocean. But against the theory of such a vacuum we have the very quality of the air.

The air, as much as we know of it, has such a great tendency toward expansion that all the hitherto worked out laws of gravitation have remained foreign to it. Were the most exterior, the most rarefied layer of air not to encounter on its way any obstacle toward its expansion in the shape of a new planet, it would scatter itself throughout the whole universe, moving farther and farther into the infinite space; the particles of the air nearer to this layer would follow its example, and, finally, the seas and rivers of the terrestrial

globe, all the water would take part in such a process of expansion, to disappear at last from the face of the earth. (We produce first just such a phenomenon with the help of an air pump). On the ground that such a thing does not exist in fact, we must suppose that there is some retaining cause, which according to custom, we will term Ether. Counteraction to the evaporation of the air consists in this, that it forces every upper layer to press upon the next lower, causing by such a progressive pressure the condensation of that layer of the atmospheric air which is next to us.

If such an ether exists in reality, then there must occur in the atmosphere those phenomena so familiar to us, which always take place in cases when the air encounters obstacles to its free motion. Let the earth rotate, then all the atmospheric space, on the ground of the attraction of the earth, will be compelled to participate in the movement, and the consequence will be that the upper layers of the air, finding a resistance in the ether, will either be retarded, or—which would be the same—assume a seeming current in a direction opposite to that of the earth's motion. Such a current of the upper stratum of the air would provoke a resistance in the next lower one, and this one, in its turn, receiving the impulse communicated to it by the upper one, would offer a resistance to its next lower neighbour, etc. Finally these two opposite currents, intermingling in their onward impulse, would form two streams—one from east to west, in which would participate, first, the whole atmospheric ocean world, and then the contents of all the watery basins; the other from west to east, into which would be drawn the very core of the terrestrial globe.

But let us make another supposition, and notwithstanding the impossibility, let us admit that there is *no* ether; that ether is no more nor less than the product of those endless hypotheses in which man has entangled himself from the first in his efforts to investigate nature; even in the latter case it will not be a difficult task to prove that the rotation of the earth must cause the current of the atmosphere to take an opposite direction. On what ground did our physicists base their suppositions when telling us that we don't feel the rotation of the earth? How do they explain the circumstance that objects on its surface are neither upset nor fall? They point to the laws of inertia. Very well! I agree with them! I agree only the better to vanquish my adversaries with their own weapons, as I have hitherto always done. You are probably aware that motion can be

imparted to any substance, but that a fluid or gaseous body can be made to move only when it is imprisoned in a hard one. Air is a body which is more than any other disassociated as to its component parts. Let us suppose that the earth has communicated its movement to the layer of air next to the surface, and thus dragged it after her. This layer, perfectly separate and distinct from the next upper one unattached to it, is unable to communicate its motion to the other and upper layers. Hence these upper layers remain unaffected by the motion of the lower one, or what comes to the same, begin to assume a *seeming* rush (or current) from east to west, with a rapidity equal to the earth's rotation. Every point of the equator during the diurnal rotation of the earth crosses in the same lapse of time 1,250 feet, but in the direction opposite to that of the earth's rotation. But such a rapidity of the atmospheric currents is nowhere to be seen, and it exceeds ten times the speed of the most terrible hurricanes.

I do not belong to those who accept their own conviction of an east and west atmospheric current for a real and already demonstrated fact. And yet all the modern physicists, scientifically convinced of the absolute necessity for the existence of such a current, have accepted it as a fact, resulting from the earth's rotation around its axis, although all their efforts to find it anywhere in nature have been in vain. Even the *passates*, explained for a certain time by the same rotatory motion of our globe, deprived at the present moment of their once famous periodicity, are now being accounted for a great deal more simply, to wit, by the different degree of heat in the upper envelope of the terrestrial globe.

We have but to represent to ourselves, in thought, all the various atmospheric currents, at one time weakening, at another increasing, and moving in every imaginable direction, called by us sometimes winds, sometimes tempests; we must imagine these winds running very often in direct opposition to each other's course, and then ask ourselves the question: Is there any possibility that such currents could exist when the air is at the same time forced to passively follow the simultaneous rotation of the earth around the sun and its own axis? Is it possible to admit that in case such currents existed in nature, our atmosphere would at the *same time* continue the constant and faithful satellite of our *earth*?

Therefore the circumstance that the rotation of the earth

around its axis is not at all felt by us; that other circumstance, that this rotation has never been in any form or manner satisfactorily proved, and *cannot* be proved; the absence, finally, in nature, of those atmospheric currents which in all justice ought to be found as a consequence of the rotation—all this serves us as a refutation of the theory of the rotation of the earth around its axis, perfectly convincing, if it were only because we do not possess a single evident proof in favour of the rotation.

Is it not a cause of wonder that the *savants* of the whole civilised world, beginning with Copernicus and ending with Kepler, first of all accept such a rotation of our planet, and then for three centuries and a half after that seek for it some proof? But, alas! they seek, and as was to be expected, find it not. All in vain; all unsuccessful!

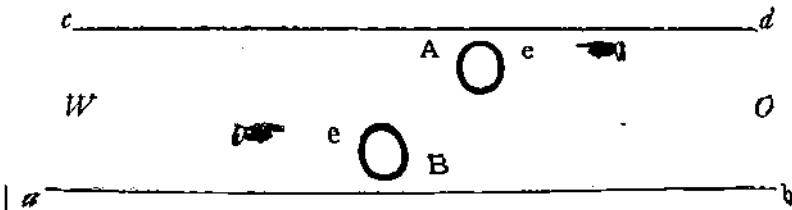
To prove the impossibility of the second proposition, *i.e.*, the revolution of the earth around the sun, will present no difficulty. We can bring self-evident proof to the contrary. *The earth revolves around the sun and is retained in its orbit by the strength of the solar attraction*, and these propositions contradict, point blank, the fundamental law of gravitation itself. It is known to everyone that the direction of the weight is perpendicular to the wall, otherwise the grain of dust would fall. In the same way the direction of the weight of our planet must be perpendicular to the sun, as to the centre of its attraction. But such, in fact, is not the case at all. The direction of the earth's weight is not only not perpendicular, but even changes with every moment.

In order to prove the correctness of my observation, we will now examine more carefully the modern theory of the annual rotation of the earth around the sun, and we will examine it under the aspect in which it is treated in the scientific works that discuss this subject. To explain the change of seasons, in other words to demonstrate the solar ecliptic, the scientists have *assumed* the following position: The earth's axis inclines to its orbit at an angle of $66\frac{1}{2}^{\circ}$; this angle is preserved by the earth during the whole time of its rotation around the sun, *i.e.*, the axis of the earth is parallel to itself at every point of its transit. We can make this theory approximately clear to ourselves by the following illustration: Taking this candle for the sun, we will now revolve around it this little globe, so that, by a simple practical experiment, we may form for ourselves an idea how the four seasons take place. (diagram omitted).

Here on the diagram we can plainly see that the axis of the earth does not change its position with relation to the earth's orbit during the whole time of the earth's rotation, *i.e.*, it remains parallel to itself. It is only by conceding this that we can explain the four seasons of the year. To this point the modern theory appears perfectly satisfactory, but if we examine it more carefully, its inconsistency will become evident. Thus I will now touch at once that incomprehensible and, at the first glance, unobserved circumstance, which has always appeared to me absurd, whenever I had to explain to my audience the rotation of the earth around the sun.

As it would be absurd to suppose that the sun, during the yearly revolution of the earth, in its turn daily circumscribes the earth, modern theory, to meet the necessity of the case, has to suppose that the terrestrial globe, while rotating yearly around the sun, turns daily around its own axis in the direction from west to east. But such two simultaneous rotations are, as we shall directly see, perfectly inadmissible. During the interval from the 21st of June to the 22nd of September such two simultaneous motions coincide well enough, but from the 22nd of September onward, and back to the 21st of June, the juxtaposition of such two motions carries us on directly to a perfect absurdity; it would follow that the terrestrial globe, rotating diurnally around its axis from west to east, moves onward in a direction quite the opposite. But I believe that everyone is aware that a moving body, according to the nature of its rotary motion, either receives an impulse forward, or, on the contrary, the impulse forward directs its rotary motion. Consequently, if the terrestrial globe rotates from west to east, then it must also proceed onward in the same direction, and, in case of a sudden appearance of some new force, compel the earth to deviate from its primal direction, the force which makes the earth to move around its axis must (if it is the stronger) either overcome the newly manifested force or be destroyed by it.

FIG. II.



If we compare the two halves (or parts) of the terrestrial revolution around the sun, to wit, the semi-revolution from W to O, through B, with the semi-revolution from O to W, through A, we find that, from W to O, the direction of the rotation agrees to a certain point with the direction of the motion, and from O to W it is directly opposite to its onward motion. This will best be seen if we rotate this sphere around the lighted candle in the same manner as represented for the earth as Fig. 1. In order to explain such a strange contradiction we ought to suppose that, during the revolution of the earth around the sun, the direction of the terrestrial weight is also changed, but this would amount to an absurdity, and something in direct contradiction to the accepted formula, that the direction of the terrestrial weight depends on the sun, as on a body which keeps the earth in its orbit. Fig. 2 will explain the whole still plainer. If the globe, *e*, is compelled to rotate towards O, in the direction pointed to by the hand, and move onward from *a* to *b*, and from *d* to *c*, then, in its motion from W to O, it must have the direction of its weight on the line *a*, *b*, and in its motion from O to W, on the line *c*, *d*, to wit, in the first case, have its weight directed downward, and in the second case upward. Although in the universal space there exists neither an up nor down, the question itself is unaffected by that circumstance. Presently we will return once more to this question, and prove that such an incessant change of the direction of the terrestrial weight is in direct contradiction with science.

According to the now prevailing modern view, the earth is kept within its orbit by the force of the sun's attraction. But even this proposition contradicts the assumption of the dual rotation of the earth, unless we make such allowances as will contradict all our scientific notions, for it is impossible to imagine to ourselves two simultaneous motions of the terrestrial globe around its axis, and around the sun, in agreement with the *change* of years and that of the seasons, during which the direction of the terrestrial weight would be constantly turned toward the sun, as we ought to find it were the earth supported in its orbit by the force of the attraction of the sun. It is supposed that in every circuitous motion there are two forces in action. For instance, if we attach a ball to a string and swing it around so that the cord will be extended out straight, then the one force, which tends to project the ball in a straight line from the centre, is named centrifugal force, and the other, contained in the very cord itself, shows a

tendency to draw back the ball toward the centre round which it revolves, and is called centripetal force. During the simultaneous activity of both the forces the ball cannot move on a direct line on which both forces tend to move it, but is forced to adopt a movement in the direction of a diagonal, and from the union of an infinite number of such diagonals, it begins moving in a circle.

If we examine a little more carefully this circuit-motion of the ball, we will find it anything but complex. That point of the ball to which is attached the cord, *i.e.*, near which acts the centripetal force developed by my hand, lies on that side of the ball which is directed to the centre of the movement, *i.e.*, in the direction of the hand, and, if the ball had a propensity at the same time to assume a motion around its axis, then the latter would find itself at the same spot where the thread is tied, and this given point on the ball ought to remain turned toward the hand. That which is law for one body is law for all other bodies, placed in the same conditions as the first. The moon—the only heavenly body so close to our planet as that we can observe it in detail—is placed, in relation to her revolution around the earth, under precisely the same conditions as the ball we are now examining is, in relation to the point where the thread is fixed. Let us fancy the ball as the moon, the hand as the earth, and the thread as the terrestrial attraction, invisible in reality, but acting like the thread, and we will see that the moon is turned toward our globe always on the same side, for the force of attraction has deprived it forever of the slightest possibility to effect any change in the direction of the weight and rotation around its axis. Why, then, not derive from the laws of motion regulating the moon, a very close deduction for our own planet? Indeed if the terrestrial globe revolves around the sun, and is kept in suspension in its orbit through the attraction of the sun, then this globe, as well as the moon, must find it impossible to rotate around its axis. In such a case, the one side of the earth would be constantly lighted by the sun, while the other would find itself in perpetual darkness. But we see no such thing, therefore we must infer that the modern explanations of the movements of our planet around its axis and the sun are devoid of the least probability, and disagree entirely with the exigencies of experiment.

Perhaps we might suppose that the terrestrial globe occupying a central position, revolves in twenty-four hours around its axis, while the sun describes annually above it

that circle which is shown by the ecliptic. But there is no room for such a supposition until the rotation of the earth itself around its axis is demonstrated on more solid proofs; and, besides, as I have shown, it is the contrary, which can be most easily proved. The immobility of our planet is chiefly maintained by me on the principle that we cannot find in Nature any constant atmospheric current always running from east to west. On the same principle, if our planet revolved around the sun, its whole atmosphere ought to be retarded and forced in a direction contrary to the forward motion of the earth, and would have to follow our planet like a long tail, as we see in the case of comets. Of whatever substance may be the tail of the latter, we are forced to examine it as the atmosphere of these as yet but little known bodies, and if the comets themselves travel in the universal space, then their atmosphere is compelled to follow them in the shape of a luminous tail.

Finally, let us return once more to the law of gravitation in order to demonstrate conclusively that the rotation of the earth around its axis and the sun is an utterly improbable hypothesis. A little further back, while repeating to you in substance the theory now thoroughly accepted of the earth's revolution, I have shewn that, as the theory now stands, the position of the terrestrial weight must inevitably be shifting at every second. Out of this would result the following: If the sun really retains the terrestrial globe in its orbit, then the direction of the terrestrial gravity must constantly tend from the centre of the earth toward the point fixed on its surface at that side which is turned to the sun; on this point acts, immediately, all the centripetal force proceeding from the sun, and, therefore, as in the instance of the moon when the centre of all the lunar gravity is concentrated on that side of her which is turned to us, it is to this point that must gravitate all the weight of the terrestrial globe as all the weaker and lighter bodies. But our experiments show to us quite the contrary: the centre of the earth's gravity does not change in the least, and placed in its middle, depends only on the terrestrial mass; no outward force of the kind of the sun's attraction is able to affect it any way, or can force it to displace itself. And if so, then do not such facts prove fully and clearly (1) that the terrestrial globe is not kept in its orbit by the sun's attraction, because such an enormous force could not but affect the point where is concentrated the centre of the earth's gravity; and (2) that the centre of the earth is at the same time the centre of its weight, and also the centre

of all the visible universe? Of course, I do not reject entirely the influence on our planet not only of the attraction of the sun, but also of the moon, but I only maintain that the force of their attraction is not so powerful as to influence, in any serious way, the solid portions of terrestrial body, when we find that even with fluid and gaseous bodies, especially such as the air, this influence is felt but to a very feeble extent. If the attraction of the sun is so trifling that it can act but in quite a slight and to us as yet not quite clear manner on fluidic bodies, then we have still less reason to suppose that such a weak force could neutralize the centrifugal force of the earth and keep it in its orbit. For such an effect as this a force of gigantic proportion would be required—a force under whose action all the terrestrial atmosphere would long since have been carried off to the sun, in the same way as the force of attraction of the terrestrial globe is ever ready to attract to itself every just-forming lunar atmosphere.

Let us now see what changes would be called for in the same department of astronomy were my assertions to be some day verified, and it should be found that the earth is motionless, and occupies the central position of the visible universe. Such changes would be in some respects important, in others unimportant. They would chiefly consist in our henceforth regarding the hitherto seeming motion of the heavenly bodies as a real motion, as the astronomer Tycho de Brahe did before. He maintained that the earth stands still in the centre of the universe, and around it, as around its natural centre, moves diurnally the whole heavenly sphere; the moon and the sun in addition to the above motion describing around the earth independent movements on special curves, while Mercury with the rest of the planets describes an epicycloid. I may also add that the position assumed by our scientists who consider the fixed stars as suns of the same nature as our own, and all the other planets as bodies identical in substance with our earth, will be found to be without foundation. Such a theory is irrational, if it were only because of the principles on which are based the determination of circumferences and weights of the celestial bodies. The weight of the sun, for instance, was determined in accordance with the amount of the expression of its imaginary attractive force on the surrounding planets. As soon as it is found that the sun must surrender its office of principal star and become simply a *planet revolving* around the earth, directly depending on *the force of the latter's attraction*, all previous calculations

will naturally be proved erroneous. The sizes of the heavenly bodies have been determined on no less false principle.

Who but is more or less acquainted with that phenomenon which shows us an object diminishing in proportion to the distance, so that if an object is placed at a distance which exceeds 5,000 times its diameter, the human eye is unable to see that object? It is on the basis of this law that the sizes of all the heavenly bodies have been calculated. According to their seeming size and the ratio of their distance from the earth, science has endeavoured to determine the number of times that their real size surpasses their seeming one. But in determining by that principle our scientists have neglected to consider one of the most important points; they forget that the law which makes objects apparently diminishing in proportion to their distance from the observer does not affect luminous bodies; the brighter the light of the body the longer its bulk will remain unchanged in our sight, whereas an object but faintly lighted becomes invisible, as I have said, at a distance which exceeds its diameter 5,000 times. If the said law extended to luminous bodies, then a flame one inch wide could not be seen at the distance of 225 yards, whereas we know from experiment that the size of its apparent bulk does not change even when the candle is carried to a distance of several thousand yards. As the sunlight is extremely bright, the bulk of the sun must therefore seem unchangeable at an extremely long distance, and **IT IS VERY POSSIBLE THAT THE SUN IN REALITY IS BUT LITTLE BIGGER THAN IT SEEMS TO US AT THE DISTANCE.** Besides that, it is not only possible but a great deal more plausible to accept the assumption that the laws which shew to us an object diminishing with the distance are applicable only to our own dense atmosphere which surrounds us, and are not operative in a medium so rare as that of the upper spheres. When, after a clear and cold night, the vapours of the air are drawn down to the earth, and the rising sun illuminates the air cleared from the mist, then the mountains, the villages, the environs and edifices, at other times hardly delineated in the blueish atmosphere, suddenly rise before our eyes as if growing up by enchantment; they seem nearer and allow us to examine the slightest details of their structure. In this case the law of the diminution of objects is evidently changed. And there *in the ether, in that attenuated matter—or rather let us only*

speak of ether as empty space—in this vacuum of the universe how can these laws be ever applied? Generally speaking, as far as I know from personal experience, the *science of optics* is not quite accurate, the sight of the human eye is more or less influenced by the purity of the atmospheric air.

Equally erroneous will be found all the determinations of distances of the fixed stars, once that we have to regard the earth as fixed. According to the now accepted and wholly dominant theory, on the 21st of December the earth is 40,000,000 miles (185,000,000 ?) from the point at which it stood on the 21st of July (June ?). On these same dates, with the help of the telescope, directed to one and the same point of the heavens, is observed a certain star which crosses the meridian in the same direction and in the same point of the heavens. It results then that a distance of 40,000,000 miles (185,000,000 ?) counts as nothing in our comparison of the distance of the observed star ! But even such an evident proof of the recision of the fixed stars from the earth loses certainly all its weight if we assume the earth to be motionless.

And now, gentlemen, allow me to lay before you one more contradiction, which, had it been insisted upon before, might have shewn to our scientists long ago the erroneousness of our astronomical calculation. It was found from the determination of the sun's attraction that every body which exerts on the terrestrial globe a pressure of one pound exerts on the sun a pressure of 27 pounds. If all bodies act on the sun with such an increased pressure, it would then seem that the mass of the sun ought to be likewise and in the same proportion more compact than the terrestrial mass, *i.e.*, it would consist of a more dense matter; and yet, by comparing the calculations of the weight with those of the circumference of the sun, it has been found that the sun's matter is just four times less in density than the substance out of which the earth is formed. The result, then, would be that one and the same body would weigh on the sun 27 times more than when on earth, and its weight would act on the sun 108 times more than it would on our planet; and yet the substance of the sun would present but $\frac{1}{4}$ of a part of the density of the matter of the terrestrial globe! This, I must say, is incomprehensible to me, and I view such a theory as the result of correct calculations based on a false principle.

I also deny the existence of the atmosphere on any

planet whatever. A heavenly body crossing the universe with a velocity hardly comprehensible cannot be possessed of an atmosphere similar to the air of our earth. And here, as before, the moon—a planet with the qualities with which we are best acquainted—gives us a fully correct comprehension, or rather it corroborates all that is shown to us by the natural laws. The moon has no atmosphere, and, therefore, there is but little probability that the other planets would have any more than she has. All the observations tending to show that the moon must have an atmosphere are based, no doubt, on equally erroneous principles; they could be accepted with any degree of certainty only when the experimenter could be carried beyond the atmosphere of the earth, or, at the least, when we should build our observations on the summit of Dhawalaghiri. The outer services of the body of the sun, moon and other planets cannot be similar in appearance to the surface of the terrestrial globe; they must consist of strongly compacted matter, such as we see sometimes in the substance of the frequently falling aerolites. All the non-solid bodies, the strata of the earth, and the rocky portions would be torn off and precipitated on the earth by the force of its attraction. Thus, on the ground of these premises, the assumption that some of the planets may be inhabited is void of any probability and has to pass into the realm of fiction.

Man, while determining the distance of the stars most important to us, on the strength of an imaginary rule of distance and falsely applied laws of the diminution of objects in proportion to their recession, began to calculate the size of these stars, and, astonished at their dimensions, mistook the fixed stars for bodies similar to our sun, and our earth for a very unimportant portion of the whole universe. Arrived at the latter conclusion, it very naturally appeared absurd to him that all these powerful, all these gigantic an numerous celestial bodies should revolve around our little globe, obey it, and submit to its desires. At that time appeared a new hypothesis: the earth is not motionless, it revolves around itself and around the sun. This theory is accepted as the correct one, and step after step are now built new suppositions, new combinations deduced from the union and combination of imagination with correct mathematical calculations.

Here I end my dissertation, although it would be but an easy matter to point out a great many more contradictions on which rests the modern theory which I now combat and is opposed to mine. We cannot help desiring and

hoping that perchance there may be found at least one astronomer who, armed with all the weapons of modern speculative science and its apparatus, will undertake to re-create the whole system of Tycho de Brahe. The result of such an attempt would doubtless prove something scientifically grand. All that now under the Copernican system appears to us so incomprehensible and diametrically opposed to the fundamental laws of nature would be finally explained in the simplest and most rational way. We can now see how right was the venerated astronomer Bandes, when expressing his opinion on Tycho de Brahe's system, he remarked : "This theory presents in itself a great deal more of probability, as it explains so well all of the individual phenomena of nature." Unfortunately, Bandes was mistaken when he imagined that this system contradicted the laws of attraction. But I believe I have fully disposed of such a misunderstanding, and proved that it was not Tycho de Brahe's system, but that of Copernicus, which contradicts all the laws of gravitation.

To add a few more proofs to our assumption we will say :

1. That the form of the continents contradicts the theory of the rotation of the earth. If our globe were revolving around its axis, then the outlines of the continents ought to elongate themselves in a direction from east to west, when in reality this elongation of configuration extends from north to south.

Besides that, the width of their northern edges arises from the attractive force of the northern pole, and the points turned south from the repulsive force of the south pole.

2. There are no fixed stars in the sense of this word, because it has been observed that these stars, besides their diurnal revolution around the earth, perform independent circuitous movements. Vain have been all the efforts of the astronomers to find a central body whose force of attraction might account for the fact that these stars are kept within their orbits ; and such a body must exist somewhere. This central body is our earth. May it not also explain the fact that the greater the accumulation of soil in the northern hemisphere the larger is the number of stars above?

3. Various changes in the fixed stars have been often remarked, namely a change of colour or the intensity of light, and sudden appearance and as sudden disappearance of single stars — which does not at all agree with the *assumption* that they are as large and independent bodies *as it has been hitherto supposed*.

4. The similarity in the component parts of all the meteorological masses, that is to say, of the bodies attracted by the force of gravity within the earth's atmosphere, gives us chiefly some idea of composition of the mass of all the heavenly bodies, and proves that they cannot be inhabited. The greatest aerolites known to us had a diameter of 7 to 7½ feet.

5. According to the exact researches of Wilhelm Malman, in the middle latitudes of the temperate zone the prevailing atmospheric current appears to be W.S.W. Although agreeably with the law of terrestrial rotation the prevailing winds ought to be found in those regions easterly, we see the contrary and find them westerly.

As my following work will tend to demonstrate the agreement in the progression of the creation of the universe with truth and fact, and taking into consideration that this pamphlet of mine (the only reasonable refutation of the earth's rotation) shows a similarity with the opinions of many scientists who preceded me, in conclusion I wish to quote a few words from Goethe. The poet, whose prophetic views remained during his life wholly unnoticed, said the following: "In whatever way or manner may have occurred this business, I must still say that I curse this modern theory of cosmogony, and hope that perchance there may appear in due time some young scientist of genius who will pick up courage enough to upset this universally disseminated delirium of lunatics." . . . *From the "Scientific American," April 27th, 1878.*

A VINDICATION OF THE DIVINE COSMOGONY.

By JOHN DOVE, M.A. (1757).

That Moses was acquainted with the most abstruse mysteries of Nature is a truth denied by none but upstart philosophers, who would revile him without having read or understood him.

The three first chapters of Genesis contain a revelation of what otherwise would never have been known, *i.e.*, the first principles or rudiments of knowledge, natural and divine. But for the information recorded in those chapters, the human race had never known science or anything con-

cerning the facts of creation. For we were created; there is nothing innate in us or derived from prior existences; language itself was given, not acquired. The philosopher who pleads for any other cause than a divine creation, simply writes himself down a fool. It is useless for the genuine truth-seeker to expect to derive information from those who will need write before they have read; or from the commentators who will give every sense of the text but the true one; or from the system-mongers who will cripple the whole Scripture to make it speak their sense; nor from the philosophers who believe they know better than the inspired historians, or argue that there is no certain standard of truth and that we were sent hither to grope in the dark or learn wisdom from our fellow worms. Moses affirms: "In the beginning God made the heavens and the earth"; the philosophers maintain the eternity of matter, make a god of it, and bow down to the idol they have set up, and would, like Nebuchadnezzar, put everyone in a furnace who refuses obedience to their decrees! To listen to their description of gravity, attraction, centrifugal and centripetal forces, it would carry the appearance of a romance. Did any man yet ever understand Sir Isaac Newton's philosophy; or will any man undertake to prove the truth of it? His warmest advocates have acknowledged "they had not all that evidence of its truth that they could desire"; because they have rejected the revelation of God, and have set up they know not what. They are incorrigible and will not be corrected. Therefore I quit them all and turn to the ecclesiastics, whose proper business it is to study and expound the Scriptures. But I have to tell them as well as the philosophers that in rejecting or doubting the book of Genesis, they stumble at the very threshold of their studies, and seldom or ever after recover themselves. If they understood or believed in Moses, they would possess more real knowledge than all their other learning can teach them.

It is or should be a matter granted, that God and His works must agree; therefore, he that fully understands any part of God's works of creation, as seen in the visible world, and can find in the account given of them in Moses, the Prophets or the Apostles any disagreement, has a right, as a rational creature to be a Deist; but if no such disagreement can be found, instead of a rational Deist, he must be a fool. And since it is truth, that philosophy and divinity *are closely connected*, and that an error in the former cannot *fail in producing an error in the latter*; and since no system

of philosophy, in any age, hitherto proposed to mankind, besides that of Moses, was ever pretended to agree with Scripture,—it is not very extraordinary that no philosopher who pretended to have any respect for the Scriptures, has ever attempted to understand and compare the philosophy of Moses with the real and demonstrable facts of nature? Can it be for want of ability, or that they wilfully prefer falsehood to truth, in the hope or belief that others would do the same? If what Moses wrote was not the literal truth, why have not his mistakes been honestly pointed out by our gentlemen of science? Moses has given us a rational process of the creation, which is more than any one else has done, and more may be said of him than any other philosopher that ever lived, viz., that he has not made one mistake in the account he has given of nature; all the others have scarce delivered one truth concerning it! Truth and falsehood can never be made to agree; therefore, all the experiments that the modern philosopher can make, will never make their system agree with truth or common sense; but they all demonstrate the truth of the Mosaic account of Nature!

The revelation of God is plain, not delivered in mysterious language, as is the modern philosophy, and, when understood, corresponds with right reason. Is it not therefore strange that so many disagreements of it should still subsist? For I cannot find that men in general know any more about it, than about the laws and language of the world in the moon, if such a world there be.

In the two first chapters of Genesis, Moses has given a distinct and positive statement of the mechanical laws or operations by which nature rose into being by the hands of her omnipotent Creator, and by which her stupendous works are still carried on; for nature came not into being by chance or from any pre-existing condition; nor was any fact stated which is not open to the examination of every intelligent person, but which no man yet, has been able to overthrow or improve upon.

But what a condition are we in at present? Not one dignitary in Europe, that has learning or honesty enough to determine the truth of these divine records! Is it possible to conceive that both Protestants and Papists have agreed to let the people be under such delusions? An absolutely correct and literal translation of the Hebrew Scriptures would present to our view one uniform system of divine, moral, and philosophical truth, that would dispel error, as

the morning dawn scatters the darkness of the night. So, then, as all that truth which the faith of a Christian has anything to do with, is contained in Scriptures of Moses, the Prophets, and Apostles, whatever agrees not with those Scriptures is to be rejected, whether it relates to divinity or philosophy. For if in them we have false accounts of the Works of God, no man in his senses will or ought to believe they contain a revelation of God. What! Shall the God of truth not give us a true account of His own work? Shall the God of Nature deceive our senses? God forbid! For as we can know nothing of God but by His Works, nor of His Works, till they are apprehended by the senses He has given us, it is utterly inconceivable to suppose He should have endowed us with such senses as are only calculated to deceive us, or by giving a false account of the works of His own hand.

If, in the language this revelation was originally made, our opponents can find but one philosophical mistake we will unreservedly yield up the whole for a cheat! The translators and the whole group of commentators are herein to blame; for they have all to a man been blinded by a false philosophy, and have resented every attempt to unshackle them; whereby they have been bewildered in uncertainty and error, and have left their readers in darkness and bondage ever since.

Are there any abettors of this heathen philosophy still amongst us? Yes, ten thousand; not only among the unlearned, but amongst our church dignitaries, our classical scholars and teachers! All on account of their ignorance and unbelief.

What will be the end of these things! I am no conjurer; but it is easy to determine what will be, from what has already taken place. It has been the fate of all kingdoms, nations, and people, from the beginning of time, upon their rejecting or perverting the revelation of God, to fall into anarchy, confusion and infidelity. The Bible is, as it deserves to be, the great charter of our liberty. The loss of the Scriptures, or swerving from, or perverting the doctrines or history contained in them, has invariably been attended with discomfiture and ruin, and always will! And if their successors continue their resistance as they have done hitherto, it cannot fail to deluge the kingdom in atheism, destroying all social virtue, and turning it into a field of blood.

The system the philosophers would establish is founded on a quicksand, on a spirit of falsehood and lies; its stones

Unhewn—its mortar untempered—and its joints all open to the weather; when the winds blow, and the floods of opposition beat against it, it must tumble down and disappoint the faith of those dupes who trusted in its strength; because it is not founded nor erected according to, but against, the appointment and design of the Creator. The Scriptures contain the instructions of God, and show us the conditions, the ordinances, the laws which He hath ordained.

I have to repeat, again and again, that the Scriptures and nature are connected, as will appear to any impartial inquirer; those who will not take the pains to study them both, will remain fools, whether I say so or not. The not attending to this connexion has been the cause of that contempt with which the Scripture has been treated. Suppose we view the dial plate of a watch, we see the hand point to the hour, by a mechanism to us invisible; but we find a book wherein the inward structure of the watch or clock is described; we are at a loss whether to believe it or not; we know not whether it be true or false. How then shall we prove its truth? By taking the machine to pieces, and examining its works; if the book and the machine exactly agree, and the former be an accurate description of the latter, the inference must be, that either the maker of the machine wrote the book, or revealed the mechanism of it to him who did. This is absolutely the case between the Bible and nature. And if this examination were firmly, and candidly, and intelligently carried through, the numbers of our foolish philosophers would soon be diminished, and their specious system utterly confounded. Moses and the Prophets never revealed the proper frame of a mouse-trap or the size of a bird cage, because they knew the star gazers would not heed such trifles, nor find any credit in constructing such things. But Moses and the Prophets did, by the inspiration and dictation of God, reveal to mankind the framework and mechanism of nature, which must have remained for ever inscrutable, but for such direct revelation; and which mode and plan of creation, when thus made known, appears true upon the highest demonstration the rational mind can demand!

Now for a coat of mail, to defend me from the tongues of scorpions, and the quills of porcupines,—a venomous serpentine brood, who besmear and befoul every divine and scriptural truth that runs counter to their almighty decrees. Let any man read those mystical and philosophical expostulations between God and Job; or let him read over both

Testaments, and he shall find; if he reads attentively, that Scripture, all the way, makes use of nature, and hath revealed such mysteries as are not to be found in all the philosophers; so that I fear not to say that nature is so much the business of Scripture, that the spirit of God, in those sacred oracles, seems not only to dwell on the restitution of man in particular, but even the redemption of nature in general, and is as jealous of the right understanding of the one as of the other.

To speak then of God, without Nature, is more than we can do, for he is not known in this way; and to speak of Nature without God, is more than we may do; for we should be robbing God of His glory, and attribute those effects to Nature, which belong only to God and to His spirit which works in Nature. No man can venture to complain if we use Scripture to prove philosophy, and philosophy to prove divinity; because there is no divinity without nature, nor any true philosophy without God. It is a union insisted on by God, however objected to by man.

If men would but take Mr. Locke's advice, and have the modesty to settle the limits of their understandings and determine what objects lay beyond, and what within their reach, they would not venture so often at things too high for them; or if they had the humility to consult Moses, he would prevent much fruitless labour and correct much inexcusable ignorance.

Real Christian philosophy is a pure and ennobling study, exalting the mind, and lifting it above every sordid pursuit, above everything that is low, little, or mean.

LIST OF WORKS QUOTED.

- A**
Atlas of Physical Geography.
Age, The
Anson's Voyage round the World.
Astronomy, Six Lectures on
Answers.
Argus Annual, The
Astronomy.
American Exporter.
Answers to Planar Questions.
Act of Parliament.
Age of Reason, The
Agnostic Journal, The
Antiquities of the Jews.
Anti-Infidel—App.
- B**
Bible versus Science, The
Belfast News Letter.
Birmingham Weekly Mercury.
- C**
Christian Million, The
Ceylon Independent, The
Chambers' Mathematical Tables.
Chambers' Information for the People
Chambers' Journal.
Cowper, The Poet
Cause of an Ice Age, The
Cape Times, The
Cape Argus, The
Cruise of the Falcon, The
Cook's Voyages.
Christian World Pulpit.
- D**
Daily Chronicle, The
Daily News, The
- E**
Elementary Physiography.
English Mechanic, The
Earth not-a-globe Review.
Errors of Geologists.
Engineer of P. W. D., Capetown.
Encyclopaedia Britannica.
Extracts from Rev. J. Wesley's Works
Echo, The
Earth and its evidences, The
- F**
Friend, Dr. W.
Figure of the earth.
- First principles of Natural Philosophy.
 Field, The
 Flood and Geology, The
 Future, The
 Fifty Scientific Facts.
 Freethinker, The
- G**
 Geological Journal, The
 Geology.
 Geologists, Errors of
- H**
 History of the Conflict between Religion and Science.
 History of the Gr. Western Railway.
 Harper's Weekly.
- J**
 Journal of Society of Arts.
 Joshua's long day.
 Joshua commanding the Sun to stand still.
- K**
- L**
 London Journal, The
 Land of the Midnight Sun, The
 Lancet, The
 Liverpool Mercury, The
 Lux.
 Leicester Daily Post.
 Lucifer.
- M**
 Modern Science and Modern Thought
 by S. Laing.
 Modern Review.
 Mensuration by T. Baker, C.E.
 Million of Facts, A
 Mill, J. S.
 More Worlds than one.
 Music and Morals,
 Museum of Science.
 Magnetism and Deviation of the
 Compass.
 Magnetism.
 Magnetism and Electricity.
 Morning Leader.
 Muses, The

N

Navigation by D. W. Barker and W. Allingham.

Nature and Man.

Natal Mercury.

New Principia, The

Noad's Lectures on Chemistry.

Nineteenth Century.

Nautical Almanac.

Navigation and Nautical Astronomy.

Navigation in Theory and Practice.

Navigation and Nautical Astronomy, by Bergen.

Navigation, by Evers.

Naval Science.

New-York Independent.

O

Our place among infinities, by R. A. Proctor.

Omoo, by H. Melville.

P

Principia, The, by Sir I. Newton.

Proceedings of the Royal Institute, Great Britain.

Popular Science Recreations.

Pagan Astronomy.

Pollock, N. H.

Primer of Navigation, A

Pearson's Weekly.

Paul Petoff.

R

Recollections of Past life.

Reynold's Newspaper.

Robinson's New Navigation and Surveying.

S

Science Siftings.

Science and Culture by Prof. Huxley.

Story of the Heavens, by Sir R. Ball.

Standard, The

South Sea Voyages.

Six Lectures on Astronomy.

Sun, Moon and Stars.

Scientific American.

Scraps.

Skellam, A. E.

Sun, The

Story of the Solar System.

T

Travels in the Air, by J. Glaisher.

Triumph of Philosophy, by J. Gillespie.

Theoretical Astronomy.

Treatise on Astronomy, A.

V

Voyage of a Naturalist, by C. Darwin.

Voyage towards the South Pole.

W

Western Christian Advocate, The

Wonders of the Sun, Moon and Stars.

Y

"Yellow Frigate," by J. Grant.

Z

Zetetic Astronomy, by Parallax.

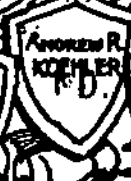
IS THE BIBLE
FROM HEAVEN?

SCIENTIFICALLY
AND
GEOMETRICALLY
DEMONSTRATED.

IS THE EARTH
A GLOBE?



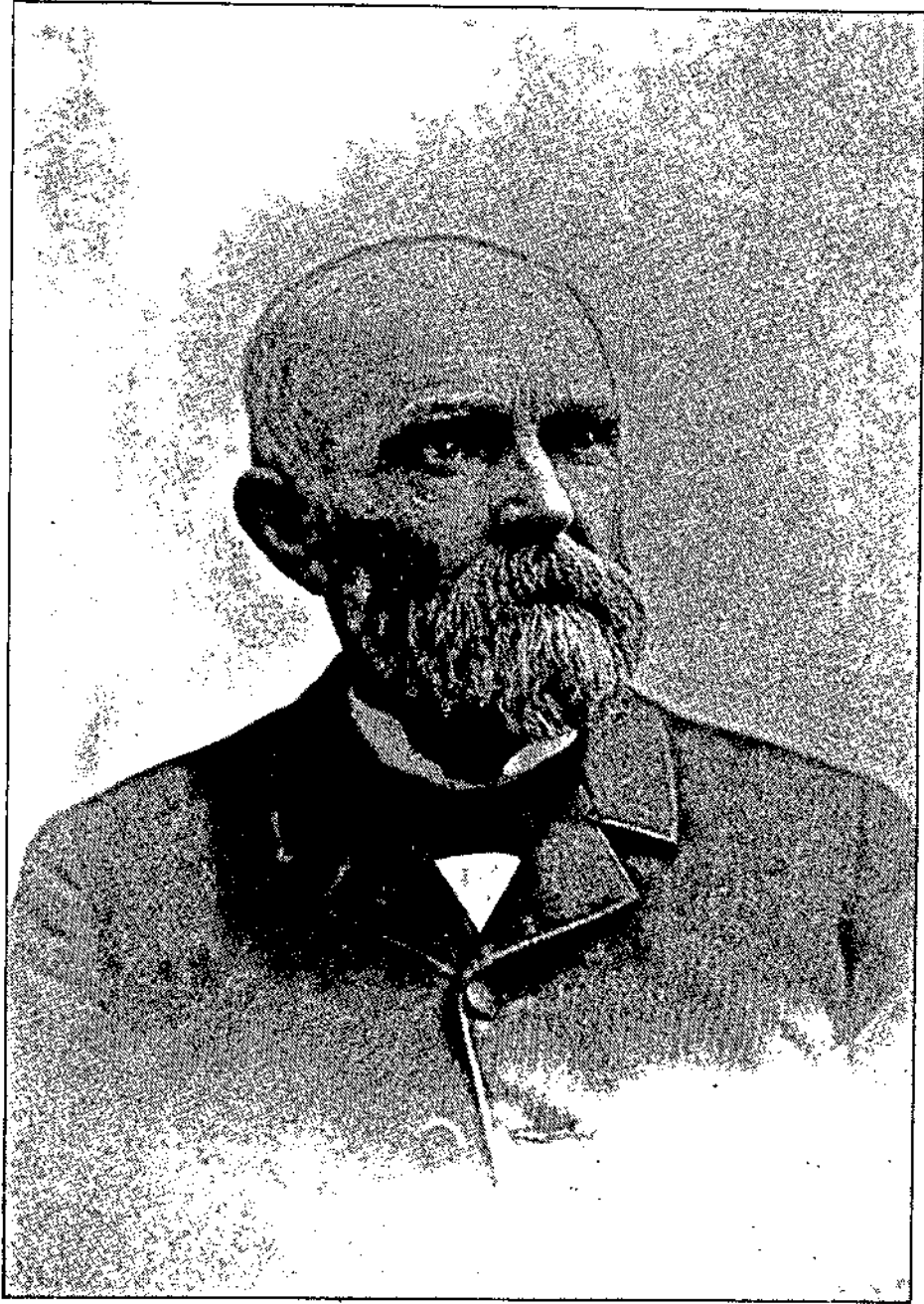
Chas. M. Oline Th. D.



PROPERTY

THE WORTHEN BAPTIST THEOLOGICAL SEMINARY
OF ILLINOIS, O'LEARY

BOOK NO.



Alex Gleason

IS THE
BIBLE FROM HEAVEN?

IS THE
EARTH A GLOBE?

IN TWO PARTS.

DOES MODERN SCIENCE AND THE BIBLE AGREE?

—ALSO—

AN ACCURATE CHRONOLOGY OF

ALL PAST TIME,

CONTAINING A

CLASSIFICATION OF ALL THE ECLIPSES FROM
CREATION.

AUTHENTICATED BY THE BRITISH ASTRONOMICAL ASSOCIATION
OF LONDON, ENGLAND.

LIBRARY

SECOND EDITION.

THE WESTERN ASTROLOGICAL & PHYSICAL OBSERVATORY

REVISED AND ENLARGED BY

ALEX. GLEASON.

BOOK No.

PUBLISHED BY

THE BUFFALO ELECTROTYPE AND ENGRAVING CO.,
BUFFALO, N. Y., U. S. A.

COPYRIGHT, 1890.
By ALEX. GLEASON.
RE-COPYRIGHTED AND RE-WRITTEN,
REVISED AND ENLARGED, 1893.



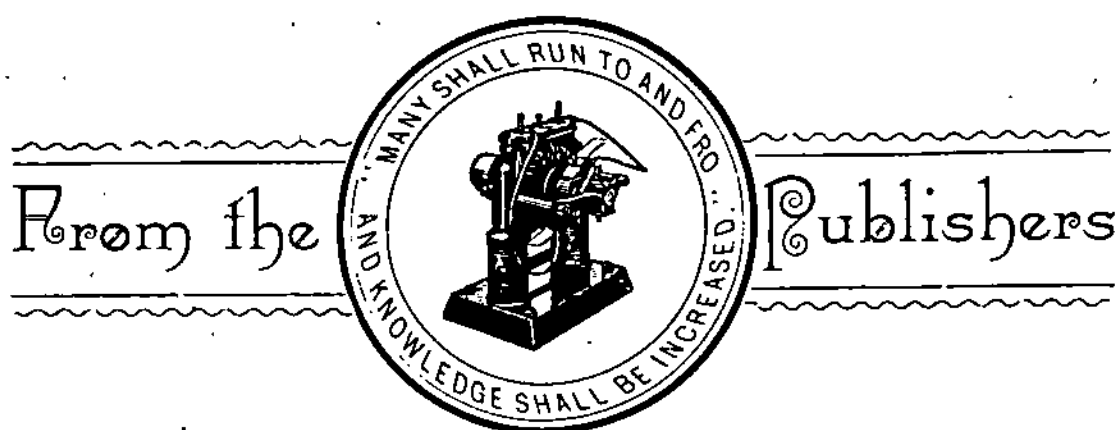
TO that class of citizens who are
known as "Honest Skeptics,"
and lovers of "demonstrated truth,"
is this revised volume dedicated by the
Author.

We assign no man to oblivion because of a
difference of opinion.

Let God and His Works be true, though
they prove all men false.



DISCARDED BOOK
Western Baptist Seminary



HOW many extraordinary changes have we witnessed in physical, as well as political and scientific sciences, and in opinions, as also in the individuals who have borne a conspicuous, and deservedly honored part, in the affairs of the civilized world during the memory of the *pioneers of the present generation!* How important have been the results of the numberless voyages of discovery, revolutions of society, of states and the wars, which have excited an intense interest during that period: an interest which has been the more constantly kept up, as the facility of communication between all the branches of the great human family, which seems, at the same time, to have gone on increasing in proportion to the multitude of events and circumstances; the manifest *evidence* of which *truths* are more strange, interesting, and of far more importance to man, than fiction. Anciently, centuries would elapse ere the most important facts could pass the *barriers* which an imperfect knowledge of the navigation of the ocean caused, or that the diversity of languages be regained, which the Lord in His wisdom confounded at the Tower of Babel, in the year 2217 A. M. or 1782 B. C.

We can but call the inquiring mind to the rapid strides of art and knowledge of every branch. For instance: the characters used in arithmetic, brought into Europe by the Saracens 991 A. D. Algebra introduced into Europe, by the same nationality in 1412 A. D.

The age of Arabic learning lasted about 500 years, and was coeval with the darkest period of the history of Europe.

But, as westward, the sun of science bore its sway,
In the East, he closes the drama of their day.

In comparison with the present state of the world, how small was the theater on which the gods of Grecian fable and the heroes of Grecian history performed their parts in that interesting drama! During the period of Roman history, it is true, the field of civilization had become much more enlarged; but, in our own times, it has extended unto the remotest bounds of the inhabitable earth. In view of these considerations, it becomes necessary for every well informed man, who would keep his relative place during this advance stage of society, to possess himself of all means of knowledge, which might have been dispensed with in former periods; the knowledge of the different sciences and arts, closely connected as they ever have been, having now more common bonds of union than in the preceding ages.

"Many shall run to and fro, and *knowledge shall be increased.*" Whether this running to and fro refers to the rapid and numerous means of transportation of the people from place to place, or the increase of knowledge in the sciences, or the increase of knowledge in reference to those things spoken to the Prophet Daniel (as some people think, which he was commanded to close up "and seal, even to the time of the end"); in either case, the fulfilment is manifest. Says an eminent writer in quoting the *Scientific American*:

“ Within the last fifty years more advancement has been made in all scientific attainments, and more progress in all that tends to domestic comfort, the rapid transaction of business among men, and the transmission of intelligence from one to another, than all that was done for three thousand years previous put together.”

In union there is strength, providing always, that in that union there is harmony.

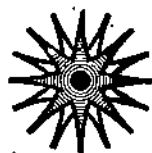
The publishers of this work have not united their efforts for the purpose of promulgating the *doctrinal tenets* of any theological denomination, or opinions of any set of men; but for the primary purpose of giving to the public, such demonstrated facts, as science from a *critical* Geodetic and Astronomical standpoint may reveal. Upon the religious views of *denominations* we make no attack, but the author and compiler is supposed to give only facts, such as bring to light the infallible Word of God as being in harmony with the science of nature, and there leave every man to choose for himself. The writer of this work has spent much time and means in making research, in the scientific archives of other countries, as well as his own practical exertions to arrive at facts concerning those things which the masses take for granted, and which things are clung tenaciously to, by some persons who regard a *popular* error of more value than an *unpopular* truth.

A great and lasting benefit to the readers of this work will be derived in the study of the chronological work as given in this book and authenticated by the “*British Chronological and Astronomical Association*,” of London, England. The work consists of a classification of “All Past Time” by cycles of eclipses and transits, from creation to the present date. These are so tabulated and made so plain, that the boy that can read and comprehend the multiplication table can give the date of

every eclipse, Lunar or Solar, that has transpired since the world began; also, all future, on the same principle; and all of this with the simple knowledge of the first or lower branches of common arithmetic.

With these considerations we commend this work to the lovers of truth and reform.

PUBLISHERS.



PREFACE.

"Why I Believe as I Do," is the Result of Truth
Demonstrated.

NO one will deny that by making practical experiments, and collecting undeniable facts, arranging them logically, and observing the results, will give the investigator the greatest satisfaction. "An hypothesis," says Webster, "is a supposition, a proposition, or principle which is supposed, or taken for granted, in order to draw a conclusion or inference for proof of the point in question—something *not proven*, but assumed for the purpose of argument." A system or *theory imagined* or *assumed* to account for known facts or phenomena. This latter method often leads the truth seeker to sad results and severe disappointments. (The writer speaks from experience in this case.) Therefore, it is the purpose of this work to offer such facts as have been demonstrated, and to that extent that they are beyond a doubt, or cite the reader to the most simple means of demonstrating the propositions. Whilst our purpose is not for the sake of "argument," but for sake of the truth, we propose not to exclude all hypothesis, but ask the candid investigator and searcher for truth to give demonstrated and axiomatical (self-evident) facts the preference.

Again, it cannot be reasonably expected that within the province of this small work, that the writer will explain all the phenomena that may arise to the thinking mind, or meet the

fancied objections of the caviller. Therefore we will, in some instances, let one *demonstrated fact* on the point or prime proposition stand as settled, until such a time as the seemingly and known phenomenal objection can be removed or explained by some other cause. As "truth is no part of a lie," we may rest assured that the latter must, sooner or later, die, while the former is immortal. Therefore, we must conclude, and insist, that "*One Demonstrated Fact*" is no less the *Truth*, though there may be a hundred phenomenal existences apparently against it.

"WHAT IS TRUTH?" "WHERE AND WHAT IS THE STANDARD?" This is to be the first and prime interrogation of this work. If there is no standard, then each and every man is left to the merciless winds of doctrine, blown by every street vender or theological quack. There is no book or platform sufficient to contain all of God's truth; the "five senses" are ours to exercise and improve, and while we would not advise independence of spirit, let us open our eyes! Be men, "prove *all* things; hold fast that which is good." If there is a divine being who has given us our senses to act upon, and to judge between right and wrong, then we are responsible to that being in proportion to what he has given us. Having been very skeptical in our early life, and in our experience having found many who require demonstrated and infallible proof of whatever they believed, we propose to give that which we require—PROOF.

READER, THIS IS TO YOU. It will be evident to every thoughtful mind, that truth in the *abstract* (so far as *human* agencies are concerned), is of two opposing natures. In order for you to get the run of my thought, I will say without fear

of refutation, that there never was A COUNTERFEIT WITHOUT A GENUINE. This is axiomatical and needs no proof.

It shall not be the object of this work to promulgate the *creeds of men*, but such truth as shall prove to be according to that which we shall, without doubt, find to be the standard, regardless of whatever has been our preconceived opinions. If, in the course of this work, we shall show, that there is a God, a Divine ruler and maker of all things, and that the book which we call the Bible is His will and word to you and to all; then do not chide me if I shall depart from the *text or title* of this work to show some of the mistakes of men. The *Truth* that you and I want, is that which is "according to righteousness;" *not counterfeit*. "God is Truth." Jesus said:—"I am the way, the truth, and the life: no man cometh unto the Father, but by me." "For the wrath of God is revealed from heaven against *all ungodliness and unrighteousness of men, who hold the truth in unrighteousness.*" Rom. 1: 18.

In order to satisfy ourselves in reference to certain principles involved, in quotations already advanced, we shall appeal to history, sacred and profane, and shall use the latter, largely to prove the former.

We will now ask you to follow us a few pages, while we examine a few witnesses which we shall have occasion to use, in case we find them unimpeachable, and such as all can accept.

In order to do this work successfully, let us go to "The Law and to the Testimony" (Isa. 8: 20.) and call on some of the Prophets that have claimed to write, "not by the will of man," but as "moved by the Holy Ghost." (See II Peter 1: 20, 21.)

Prophecy is history in advance (Webster), and the longest line of this history in advance, which is given in summary and

detail, having reference to *time*, is found in the book of Daniel (Dan. 2: 7, 8, 9). This advance history commenced with the first Universal Kingdom, with Nebuchadnezzar, B. C. 603 years, and is to terminate with the Fifth Universal Kingdom of God, which is to consume *all* other Kingdoms and stand forever, this Kingdom of the most "High," with His saints, and *all* dominions in honor and obedience.

Now if we shall find no *discrepancy* in this history, by going over it carefully, and bringing other witnesses, sacred and profane, from the first date (603 B. C.) to the present, what shall we conclude as to the inspiration and divine infallibility of the witnesses' testimony? We will leave you to judge.

With these considerations, let us examine the history, *sacred* and *profane*, for a few moments only, and observe the rise and fall of the four *Universal Kingdoms* of this earth. When we have examined these two histories, if we shall find them to harmonize, then we can no more deny their truthfulness, in the prime affirmation, than we can deny our own existence.

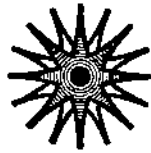
We will further add, and frankly confess, that the writer is what some might justly term a *religious liberalist*; believing that every man is endowed with a God-given right to worship God according to the dictates of his conscience, *providing, always*, that he will allow the *Spirit* and *Word*, which always agree, to govern and *enlighten* his *conscience*, and without the reception of the two God-given entities; the inner man has not reached the standard that would meet the pleasure of his Maker, and he is therefore amenable to the Creator only.

We have heard say, that "All religious truth is derived

from the Bible." True! We also read, "Every Scripture is inspired of God." (II Tim. 3: 16, N.V.) "Without Faith it is impossible to please God."

But when fanatic zeal to man is wedded fast,
To some dear falsehood he clings at last.

And yet, unreasonable men will charge the Bible with all
the false doctrines the world contains.



CONTENTS

PREFACE.

From the Publishers.—Author, Why I Believe as I Do, is the Result of Demonstrated Facts.—What is Truth?—Where and What is the Standard?	V—XIII
---	--------

CHAPTER I.

Tradition Against Truth and Reform.—History: Its Moral and Philosophical Relations.—Rules of Interpretation of Scripture.—A Bible Reading.—A Prophetic Bible Reading on Daniel and Revelation.—First Written and First Printed Document.....	1-27
--	------

CHAPTER II.

Infidels and the Bible.—Voltaire.—Thomas Paine.—Rev. L. A. Lambert and R. G. Ingersoll.—Captive Maidens, Murder of the Canaanites, etc.....	28-45
---	-------

CHAPTER III.

Geology of the Bible.—Geology and Astronomy.—Creation of the World, etc., According to Popular Scientists. (See also Chapter six.)—The Mosaical Record of Creation Contrasted with the Popular Views.—How was the World Framed?—Out of What was it Made?—Purpose of Creation.—Other Worlds than This.—Do the Scriptures Teach that the Earth is a Globe?—Do the Scriptures Teach that the Earth and Seas Constitute the Earth?—Does the Earth Move or Rotate?—Of Importance to the Religious World.—Does the Sun Move? Joshua and Dr. Adam Clark, John Wesley, etc.....	46-67
---	-------

CHAPTER IV.

- General Summary of Conclusions, Inevitable from Evidences Produced in Previous Chapters.—The Stars.—Chronology.—Sun, Moon and Stars as Lights. (Further set forth in Chapter six by Dimbleby, Chronology.)—Glory of the Heavenly Bodies.—Up and Down—Do they Exist Other than Relative Terms... 68-74

CHAPTER V.

- The Ancients; their History. Early Astronomers, Sages of the Present System.—Measuring the Stars.—Exploring Expedition by Capt. Wilkes.—Arctic and Antarctic Icebergs.—Tycho (Tyge) Brahe's System of Astronomy.—Galilei Galileo.—Abjuration of Galileo.—Sir Isaac Newton.—Newton's Insanity; forgets his meals, tries to demonstrate the motions of the Earth, but fails. Derangement of his Intellect; Fall of the Apple..... 75-102

CHAPTER VI.

- ALL PAST TIME, by the British Chronological and Astronomical Association.—Objects and Work of the Association.—Accuracy First—Arguments Afterwards.—Explanation.—First Line of Time.—Historical Dates and Periods.—Interesting Events.—Christian Era.—All Past Years from Creation.—Important Suggestions to all Nations.—Dates of the Sabbath Days during the Deluge.—Flood Period Concluded.—Antediluvian Solar Cycle showing the Dates of all Sabbath Days.—How any Man can Prove the Date of the Flood.—The Lunar Cycle.—Second Line of Astronomical Time.—Astronomical Method of Proving the Year of the Flood.—Ancient Hebrew Solar Cycle.—How to Find the Years.—How the Solar Cycle is Proved.—Self-same Days..... 103-150

CHAPTER VII.

- The Death of Abel at the End of Intercalary Days of Year 125.—Remarks Concerning Years.—How to Find any Year on the Solar Cycle.—Sun Stands Still.—The Sabbath Days not of Hebrew Origin..... 151-156

CHAPTER VIII.

- The Literal Week.—Long Lives of the Patriarchs.—The Eden Above vs. Below..... 157-164

CHAPTER IX.

- March of the Children of Israel from Egypt.—The Deluge, 120 Years to the Flood in 1656.—Result of Recent Discoveries.—The Sojourn.—The Crucifixion.—The Captivity.—Cleansing of the Sanctuary.—Daniel's Vision according to Lunar Cycles.—An Interesting Event, in Daniel 10: 2.—Prophetic Periods are Cycles.—Interpretation of the Word a Vital Point..... 165-186

CHAPTER X.

- The Seventy Weeks and Twenty-three Hundred Days by Prof. Dimbleby and by Prof. U. Smith..... 187-198

CHAPTER XI.

- Day of the Crucifixion and Resurrection of Christ.—Argument from the Types.—A Great Error of the English New Testament Corrected.—Another Mistranslation..... 199-240

CHAPTER XII.

- "Vox Dei" or Eclipse Line of Time. (Psalm 19: 16.)—Eclipse of the Sun.—A Solar Cycle.—Eclipses from Creation to the Present by Lines.—A Common Team of Eclipses (70) Occurring Every Eighteen Years.—How Eclipses Prove any Period of History.—Prof. Morrison's Letter.—Practical Use of Eclipses in Proving History.—The Crash of Matter and the Wreck of Worlds.—A Gauge Proving All Past Time.—Chronology Authenticated by the British Chronological Association.—Sun Dial of Ahaz.—Seventh Day vs. the First.—Bible vs. History, Encyclopædias, etc..... 241-262

SECOND PART.

CHAPTER XIII.

- Demonstrated Evidence that the Earth is not a Globe.—Webster on Straight, Curvature, etc.—Encyclopædia Britannica on Same.—Table of Curvature or Divergence.—Tests on Lake Erie, Erie Canal and other places, by the Author.—Suez Canal 100 Miles Level.—A Book of British Standing Orders.—Mr. Lockyer's Illustrations.—Limit of Vision and Horizon Considered.—The Apparent Concavity of the Earth as Seen from a Balloon.—Sunrise and Sunset.—Horizon Line by Dr. Hobot-ham.—The Sun's Motion Concentric with the Polar Center.—Noonday Sun.—A Midnight Polar Sun..... 263-301

CHAPTER XIV.

- The Sun's Altitude.—What is the Truth?—The Sun's Distance, etc., by Prof. Swift.—The Sun's Distance, etc., vs. the Author.—A Scale of the Solar System..... 302-319

CHAPTER XV.

- Extent and Form of the Sun's Rays.—Day's Length vs. North and South.—Prof. J. Morrison, Almanac Office, Naval Department, Washington, D. C.—The French Antarctic Expedition.—The English Antarctic Expedition.—Third Expedition.—Antarctic Exploration..... 320-331

CHAPTER XVI.

- Eccentricity of the Sun's Path.—The Solar System, or Relative Size of the Planets as Compared with our Sun.—Consistency of Distance, Magnitude, etc.—The North Star or Polaris..... 332-339

CHAPTER XVII.

- Circumnavigation, Illustrated.—Gaining or Losing Time on Circumnavigating the Earth.—Declination of Polar Star and other Objects.—Refraction of the Atmosphere.—Distance and Dip of Horizon from Different Navigable Heights Above the Surface of the Sea.—Scale of English Miles Corresponding to Nautical or Geographical Miles.—Scale of Minutes and Degrees of Longitude Corresponding to English Miles, Nautical Time, and Sun Time.—Longitude and Time, Comparison of.—A New Map of the World As It Is.—Pythagoras' System of the Universe..... 340-352

CHAPTER XVIII.

- Perspective Laws and Vanishing Points.—Jupiter's Moons, etc.—Transits and Eclipses vs. Orbit of the Earth.—The Rivers Nile, Amazon and the Mississippi..... 353-366

CHAPTER XIX.

- Degrees of Longitude South vs. North of Equator.—A Challenge Considered.—Authentic Records.—Log Book Record.—Northern Steamships vs. Southern.—Thales vs. Dark Ages.. 367-381

CHAPTER XX.

- Closing Considerations.—A Peculiar People.—A "Thus Saith the Lord."—Truth and the Glory of God Inseparable..... 382-391

Points from Popular Authors, Selected by R. E. L. J. Lovell, Vadis, W. Va.—How the Continents Attract Seas—A Convenient Diagram.....	392-402
--	---------

TABLES.

Antediluvian History.....	114
Hebrew History.....	115-120
Christian Era.....	121
Summary of All Past Years from Creation.....	121
Dates of the Sabbath Days During the Deluge.....	124
The Flood Period.....	127-131
Antediluvian Solar Cycle, Showing Dates of All the Sabbath Days.	133
Each First Year of the Antediluvian Solar Cycle.....	139
Method for Proving the Year.....	142
Ancient Hebrew Solar Cycle (Insert).....	146-147
How to Find the Years.....	147
When Abraham Left Ur.....	148
March of Children of Israel from Egypt, etc.....	166
Solar and Lunar Analysis.....	174
Dates of the Crucifixion and Resurrection.....	180
"Your Hour and the Power of Darkness."	214
Number of All Past Years.....	245
Eclipses from Creation to the Present Time, by their Lines.....	248
Birds' Eye View of a Common Team of Eclipses (70) Christian Era.	250
Solar and Lunar Eclipses (Prof. Morrison, Washington, D. C., U.S.A.)	252-253
Guage Proving All Past Time.....	257
Chronology.....	258
Curvature of the Earth.....	269
Log Book Records.....	377
Steamships' Specimen Runs, North vs. South.....	379

CUTS AND DIAGRAMS.

FIG. NO.	PAGE.
1—Nebuchadnezzar's Image.....	10
2—Voltaire.....	32
3—Copernicus' Orbit of the Earth.....	79
4—A Ball or Circle $2\frac{1}{2}$ Inches, (8) Eight Miles Distance.....	82
4a—Alpha Centauri 221,000 times the Sun's Distance, this the Nearest Star.....	84
5—Eclipse of the Sun—"Vox Dei".....	241
6—Illustration of Divergency.....	267
7— " " " Continued.....	273
8—Arc of Suez Canal, 100 Miles Level.....	275
9—Lockyer's Five Ships at Sea, No. 1.....	276
10— " " " " " No. 2.....	277
11—Limit of Vision and Horizon Line.....	281
12— " " " from a Balloon.....	284
13—Scale—Section of an Arc vs. Two Miles Altitude.....	286
14—Sunrise and Sunset.....	287
15-16—Horizon Line by Dr. Hobotham.....	289
17-18— " " and a Midnight Sun.....	294
19—Noonday Sun.....	297
20—A Midnight Polar Sun.....	300
21-22-23—The Sun's Altitude, Motion, etc.....	304-306-307
24—Co-equal Distances vs. Altitude.....	315
25—A Scale of the Solar System.....	318
26-27-28—Extent and Form of Sun's Rays.....	321-322
29—A Ship in the South Boundary of Ice.....	327
30—Eccentricity of the Sun's Path (insert).....	333-334
31—The Solar System as Compared with the Sun.....	335
32—Polaris and the Great Bear.....	337
33-34-35—Circumnavigation Illustrated.....	341-342
36—Dip and Distance of Horizon.....	347
37—Scale of English Miles, Corresponding to Nautical or Geograph- ical Miles.....	349
38—Scale of Minutes and Degrees of Longitude, Corresponding to English Miles, Nautical Miles, Sun and Time.....	349
39—Vanishing Laws—Perspective Distances.....	353
40—Jupiter's Moons.....	354
41—Transits and Eclipses vs. Orbit of the Earth.....	361
42—Cape of Good Hope and Cape Horn.....	371
43—Diagram showing Longitude in Miles at any Latitude North or South of the Equator.....	402

IS THE BIBLE FROM HEAVEN?

PART FIRST.

CHAPTER I.

Tradition Against Truth and Reform.

THE learned historian, *Archibald Bower*, says, "To avoid being imposed upon, we ought to treat tradition as we do a notorious liar, to whom we give no credit, unless what he says is confirmed to us by some person of undoubted veracity. False and lying traditions are of no recent date, and the greatest men have, out of a pious credulity, suffered themselves to be imposed upon by them."—*Hist. of the Popes*, Vol. I, p. 1.

We would, with due respect to great and good men, give their opinions full value, yet not any the more so because of their sayings being ancient; let them be proven.

Paul advised Titus to "Not give heed to the Jewish fables, and commandments of men, that turn from the truth."—*Titus* 1: 14.

Since time immemorial until now, every *advance step* in reform has been opposed by those in favor with *authorized* versions, traditions, fables, and opinions of men; yet, while we consider this work limited, we cannot refrain from giving a few samples of this fact. The learned and famous Dr. Eck spoke against Luther as follows:

"I am surprised at the *humility* and *modesty* with which

the reverend doctor undertakes to oppose, alone, so many *illustrious fathers*, and pretends to know more than the Sovereign Pontiff, the councils, the doctors, and the universities. It would be surprising, no doubt, if God had hidden the truth from so many saints and martyrs until the advent of the reverend father."—D'Aubigne's Hist. Ref., Vol. II, p. 59.

Sebastian Meyer gives the following refutation of the above: "To have a thousand years wrong will not make us right for one hour, or else the Pagans should have kept to their creed."—Id, Vol. II, p. 427.

"An error is no better for being common, nor the truth the worse for having lain neglected; and, if it ever be put to vote anywhere in the world, I doubt, as things are managed, whether truth would have majority, at least while the authority of men, and not the examination [demonstration] of things, must be its measure."—Essay on Human Understanding, Book 4, Chap. III, Sec. 6, by John Locke, the great Christian philosopher.

We shall hold that truth is of God; that it is righteousness, and not iniquity. The opposite of truth is anti-Christ; and, to say the least, to those acquainted with the history of man, it is as old as man, and, we believe, older by far. If, then, we shall produce demonstrated evidence of our position, do not question the same by saying: Why then has this universally accepted theory been so long believed and taught? Great names and titles we find enrolled on each side of all controversies; and if these authenticate hypothetical tradition, and satisfy weak consciences, then there is no error in the religious buffoonery of *Pagans*, *Mahometans*, or any other religion that fancy may bring forth, and it may be received with sacred and profound reverence.

History: its Moral and Philosophical Relations.

We can reason intelligently only from what we know, and without demonstrated facts our fancied knowledge is worse than ignorance. With those who take no delight in true history, the proverb may apply: "Where ignorance is bliss, it is folly to be wise."

It has been quite often remarked that all history is uncertain. Were this true to the full extent, there would be no use in attempting to show the value of that which may be known with certainty. While it is true that the detail or minute events of profane historians may disagree, it is also equally true that the more valuable part of history rests on immovable monuments, which admit of no uncertainty in their prime character and results. To the student of history, sacred or profane, the decline and fall of great empires is no less important and instructive than their origin and rise. To him who wishes to know his approximate whereabouts in the history of mankind, its physical duration, and that of his fellow beings, the pleasure and permanent satisfaction does not consist in highly colored pictures of crime, nor eloquence or rhetoric of the writer, but truth in its simplicity.

The facts of *four universal monarchies* or kingdoms having existed on the earth in times of the past—Babylon, Medo-Persia, Grecia and Rome—no person of ordinary intelligence will deny. History and historians, pyramids and monuments, and excavated ruins, relics, etc., are too numerous for any successful controversy on the part of the skeptic. Further, that so sure as there existed the first Universal Kingdom, so sure there existed Nebuchadnezzar, the King of Babylon, and Daniel, a Hebrew captive. To Nebuchadnezzar (in a dream) was first given, and in the symbol of an image in the form of

a man, the *future history* of the world and the destiny of mankind.

We will notice for a few moments some of the facts concerning this history in advance. *Seven hundred and twelve years before Christ*, while Baladan was king, it was foretold by the Prophet Isaiah, that all of the treasures of his house, and the house of the Lord, together with Hezekiah's sons that should issue from him, should be carried to Babylon. (See Isaiah, 39.) *One hundred and five years later*, the idolatrous monarch, Nebuchadnezzar, was upon the throne ready to fulfil the Word of the Lord, so long before spoken by His servant and prophet Isaiah. (See Dan. 2: 1.) "The Lord is not slack concerning His promise, as some men count slackness; but is long suffering toward us, not willing that any should perish, but that all should come to repentance." When God *speaks* it is as literally the truth before fulfilment, to our eyes, as it is after, for in reference to His word of promise: "*One day* is with the Lord as a thousand years, and a thousand years as one day."

The Lord's wisdom and power above all kings, kingdoms, prelates or powers, was manifest in bringing, first, His own people into bondage under the idolatrous monarch which He had made ruler of the then habitable world. In this very act, God not only made manifest His own power and wisdom throughout the then known world, but to all coming generations, "until the God of Heaven should set up His everlasting kingdom possessed by the saints of the most High."

In order to show the *divine history* of man and its ultimate termination and its relation to history, past, present and future, we will necessarily have to enter somewhat into detail, in noticing their parallel course and the harmony existing between the two. "The secret things belong unto the Lord our God; but those things that are revealed belong unto us and to our

children forever, that we may do all the words of this law." Deut. 29: 29. Also John 5: 39. Jesus commands us to search the Scriptures. "Surely the Lord God will do nothing, but He revealeth His secret to His servants the prophets." Amos 3: 7.

While it is literally true that God will do nothing but He revealeth His secret to His servants, the prophets, He is just as able and willing to show to the idolatrous king on his throne, His love for him and the devotees of the king's realm, and reveal through God's own chosen vessel His purpose concerning the human family.

We will now give a synoptical description of Nebuchadnezzar and his kingdom, according to the well-known historical records of various writers, after which we will give the Scriptures an interrogation, letting them give their own interpretation.

According to the testimony of the "greatly beloved" prophet of God (Daniel), Nebuchadnezzar had a wonderful dream in the year 603, B. C., in which he beheld the kingdoms of earth symbolized by a Great Image. This great image represented by the Head of Gold, Babylon; Breast and Arms of Silver, Medo-Persia; Thighs and Sides of Brass, Grecia; Legs of Iron, the Fourth or Roman Kingdom. Dan. 2: 31-40. The forty-second verse represents the kingdom divided into ten parts by the feet and toes.

Let us look for a moment at the most wonderful empire the earth has ever contained or known, of which the city of Babylon was the metropolis, and the talented king, Nebuchadnezzar at its head. This kingdom arose from the old Assyrian empire founded by Nimrod, the great-grandson of Noah. Gen. 10: 8-10 (margin). In prophecy it dates from B. C. 677, because it then became connected with the people of God by the

capture of the king of Judah and his people. It reached the height of its glory under Nebuchadnezzar, to whom this dream was given. The metal used to represent this kingdom is the finest of all the metals, and fitly represents the kingdom, as it was, in riches and splendor, the grandest of all earthly kingdoms.

The city of Babylon, its capital, was laid out in a perfect square, fifteen miles on each side; consequently the whole circuit of the walls was sixty miles. These walls were three hundred and fifty feet high and eighty-seven feet thick, with a mote, or ditch, outside of the city of the same cubic capacity as the wall, and filled with water. It had fifty streets, twenty-five running each way, one hundred and fifty feet wide and fifteen miles long, paved with polished stones. Over one hundred towers rose above the battlements of the walls. It contained two hundred and twenty-five miles of inclosed surface, laid out in luxuriant pleasure grounds and gardens, interspersed with magnificent dwellings. The river Euphrates ran through the center, with a wall on either side equal to the outer walls, making thirty miles of river wall, or ninety miles of wall in all: one hundred and fifty gates of solid brass, and hanging gardens rising terrace above terrace, to the height of the walls themselves. Among the large buildings was the temple of Belus, three miles in circumference at the base; also the royal palaces, one three and one-half and the other eight miles in circumference, connected with each other by a subterranean tunnel under the river and its walls.

Never before nor since has the earth seen the equal of this city. See "Rollin," or Goodrich's "History of All Nations."

Babylon was succeeded by Medo-Persia, represented by the breast and arms, B. C. 538, when Babylon was taken by Cyrus, and Darius the Median was placed upon the throne.

Isa. 44:28; Dan. 4: 30, 31. This was in turn succeeded by Grecia, represented by the brazen portion of the image, when Darius Codomannus was overthrown by Alexander the Great, at the battle of Arbela, B. C. 331. This Grecian kingdom, after passing through various changes, was finally all absorbed by the mighty empire of Rome, which became connected with God's people by the famous league between the Jews and Romans, B. C. 161. We understand from verse forty-two that this fourth kingdom was to be divided into ten parts; and we learn from "Gibbon's Rome" and others that this kingdom was divided between the years A. D. 356 and 483 into ten divisions.

Let the reader bear in mind that we are now examining *symbolical and typical Scripture*, and if we take the plan that God has ordained and given in His Word we shall make no mistake. First, let us ascertain from God's Word what this rule is and then proceed, and I feel assured, kind reader, that if you are a lover of truth and desire the fruit of its inevitable glory and final triumph, you will find satisfaction to the fullest extent.

Rules of Interpretation of Scripture.

a. "If there arise among you a prophet or a dreamer of dreams and give thee a sign or a wonder, and the sign or wonder come to pass. . . ." Shall we believe this sign or wonder, although it is apparently true? *Ans.* (Isaiah 8: 20.) "To the law and to the testimony; if they speak not according to this Word, it is because there is no light in them."

b. When a position is taken in regard to a text of Scripture, and that text corroborates all others in the Bible, on the same point in question, then we may feel safe to trust our faith on the said portion of Scripture.

c. Whatever disagrees with an *axiom* or a *demonstrated fact*, whether it be in the order of morals, philosophy or science, it is "falsely so called," and is never harmless, and sooner or later will reap its reward.

d. The Bible is its own expounder and does not *necessarily* require outside matter to prove itself; man is simply to give the Word.

e. All terms used by the inspired writers of the Bible must mean the same in one place as they do in another, providing that the same subject is before the writer of the Word.

f. When symbolical or typical language is used, it is so stated; and when so taken and so understood, it is the more emphatic and harmonious to the lover of truth. Let us examine the Word regarding these principles and we will find it to harmonize with every well-established principle of truth. And, reader, you and I have the same right to understand that Word that was given "*unto us and our children forever*," that the priest, the judge or the king upon his throne has, for this Word is to judge us at the Last Day, and the gates of Hades shall not prevail against it, neither shall it return unto its author void.

We will now interview a few passages of the Bible (falsely so-called pretentious book), after which we will bring forward those who have written for and against it, and weigh them by their own standard or merits.

A Bible Reading.

1. What does Peter tell us we are to *know first*? 2. Pet. 1: 20.—"Know this first, that no prophecy of the Scripture is of any private interpretation."

2. How did this prophecy come? (New. V.) 2. Pet. 1:

21.—“For no prophecy ever came by the will of man; but men spake from God, being moved by the Holy Spirit.”

3. Since it came by the Holy Spirit of God; for whose *special benefit* is it? 2. Tim. 3: 16, 17.—Every Scripture inspired of God is also profitable for teaching, for reproof, for correction, for instruction which is in righteousness: that the man of God may be complete, furnished completely unto every good work.” (N.V.)

4. Does not the Scripture belong to the laity as well as to the priesthood? Deut. 29: 29 (last clause).—“But the things that are revealed belong unto us and our children forever, that we may do all the words of this law.”

5. By what are we finally judged? S. John. 12: 48.—“He that rejecteth me, and receiveth not my sayings, hath one that judgeth him: the Word that I spake, the same shall judge him in the last day.”

A Prophetic Bible Reading on Daniel and Revelation to show the literal fulfilment of the Word:

“Behold the former things are come to pass, and new things do I declare: before they spring forth I tell you of them.” Isa. 42: 9.

6. Who was Daniel? Dan. 1: 6.—“Now among these [captives] were of *the children of Judah*, Daniel, Hananiah, Michael and Azariah.”

7. Who was Nebuchadnezzar? Dan. 1: 1.—“In the third year of the reign of Jehoiakim, king of Juda, came *Nebuchadnezzar, king of Babylon*, unto Jerusalem and besieged it.”

8. When did Nebuchadnezzar have a notable dream? Dan. 2: 1.—“And *in the second year* (B. C. 603, margin) of the reign of Nebuchadnezzar, *Nebuchadnezzar dreamed dreams*,

wherewith his spirit was troubled and his sleep brake from him."

9. What did King Nebuchadnezzar see? Dan. 2: 31.—"Thou, O King, sawest and behold *a great image.*"

10. What was the image composed of? Dan. 2: 32, 33.—"This image's head was of *fine gold*, his breast and his arms of *silver*, his belly and his thighs of *brass*, his legs of *iron*, his feet part of *iron* and part of *clay*."

11. What became of this image? Dan. 2: 34, 35.—"Thou sawest till that a stone was cut out without hands, which smote the image upon his feet *that were of iron and clay*, and brake them to pieces. Then was the iron, the clay, the brass, the silver and the gold broken together, and became like the chaff of the summer threshing floors; and *the winds carried them away, that no place was found for them*: and the stone that smote the image became a great mountain and filled the whole earth.

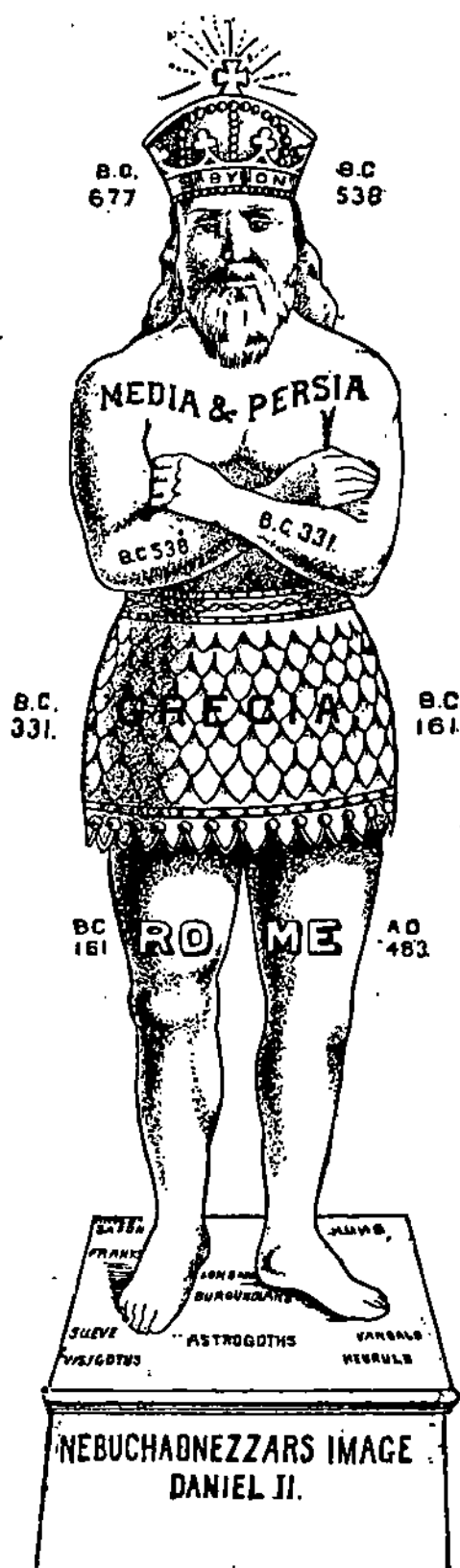


Fig. 1.

NOTE—By comparing Jer. 25: 32, 33 with Dan. 7: 2 and Rev. 17: 15, we understand that the *winds* are a symbol of *war and strife*: hence, we conclude it is the latter that God uses to depopulate and destroy the *political world*.

12. What did the image represent? Dan. 2: 37, 38.—“Thou, O King, *art* a king of kings: for the God of heaven hath given thee a kingdom, power, and strength, and glory. . . . Thou art this head of gold.” [As “king” implies a kingdom, and the following verse says: “After thee shall arise another kingdom.” We therefore understand the gold to represent Nebuchadnezzar’s kingdom and not Nebuchadnezzar in person.]

13. Who took the kingdom following Nebuchadnezzar? Dan. 5: 31.—“And *Darius the Median* took the kingdom, being about threescore and two years old.” (B. C. 538.)

14. What other direct testimony have we for the consecutive kingdoms, following Nebuchadnezzar’s kingdom? Dan. 8: 20, 21.—“*The ram which thou sawest having two horns are the kings of Media and Persia. And the rough goat is the king of Grecia: and the great horn that is between his eyes is the first king.*” [History tells us that Alexander the Great was the first king of Grecia; therefore, we have direct and positive testimony for the three first universal kingdoms of the world.]

15. What represents the Fourth Kingdom? Dan. 2: 40.—“And the *Fourth Kingdom* shall be strong as *iron*: for as much as *iron* breaketh in pieces and subdueth all things: and as iron that breaketh all these, shall it break in pieces and bruise.”

16. What other specifications designate the Fourth Kingdom? Dan. 2: 41.—“And whereas thou sawest *the feet and toes, part of potter’s clay, and part of iron*, the kingdom shall be *divided*.”

17. Did the Fourth Kingdom bear rule over all the *then known world*? Luke 2: 1.—“And it came to pass in those days, that there went out a decree from Cæsar Augustus that *all the world should be taxed.*” (Margin enrolled.) The fact that: the Roman Empire had power to enroll for taxation the whole world, shows that his jurisdiction extended thus far.

History in abundance corroborates this. Gibbon's "Decline and Fall of the Roman Empire," Vol. 1. Chap. 3, at the close says: "The Empire of the Romans *filled the world*; and when that empire fell into the hands of a single person, the world became a safe and dreary prison for his enemies." To resist it was fatal, and it was impossible to flee. "*Wherever you are,*" said Cicero to the exiled Marcellus, "*remember you are equally within the power of the conqueror.*"

18. Whereas we have learned from Verse 41 that the Fourth Kingdom was to be divided. We ask, were these nations ever to have another universal union? Dan. 2: 43.—"Whereas thou sawest iron mixed with mirey clay; they shall mingle themselves with the seed of men: but *they shall not cleave one to another*, even as iron is not mixed with clay."

19. By the divisions of the feet and toes we understand there should be ten corresponding divisions of the nations. Was this true? The list which Bishop Llyod has given is as follows: "1, Huns, about A. D. 356; 2, Ostragoth, A. D. 410; 3, Visigoths, about A. D. 378; 4, Franks, A. D. 410; 5, Vandals, A. D. 407; 6, Suevians and Alans, A. D. 407; 7, Burgundians, A. D. 407; 8, Herules, A. D. 476; 9, Saxons, about the same time 476; 10, Longobards or [Lombards,] about 483-484 A. D." Dr. Gill's comments on Dan. 7: 24.

20. We learn that these several divisions of Rome were accomplished by the incursions of barbarous tribes from the north of Europe who conquered the empire. (See Gibbon.) And these kingdoms still exist under the form of various kingdoms of Europe; though there are some of them known by other names.

21. But what happens to these kingdoms of the *earth*, prior to the setting up of the *Fifth Universal Kingdom*? Dan. 2: 44.—"And in the days of these kings (or kingdoms) shall

the God of heaven set up a kingdom, which shall never be destroyed."

22. What is to become of the inhabitants of the earth, and their earthly titles? (Kings, &c.) Dan. 2: 34, 35.—"Thou sawest till that a stone was cut out without hands, which smote the image upon his feet that were of iron and clay, and brake them to pieces."

23. What country do they inhabit? (35.)—"Then was the iron, the clay, the brass, the silver and the gold broken to pieces together, and became like the chaff of the summer threshing floors; *and the wind carried them away that no place was found for them.*"

24. And what was it that filled the earth after they left it? (Last clause 35th verse.) And the *stone that smote the image* became a great mountain and *filled the whole earth.*

25. What was this Stone or Rock that filled the whole earth? 1. Cor. 10: 1-4.—"Moreover, brethren, I would not that ye should be ignorant, how that all our fathers' were under the cloud, and did all pass through the sea. (2) And were all baptized unto Moses in the cloud, and in the sea. (3) And did all eat the same spiritual meat. And did all drink the same spiritual drink: for they drank of that spiritual Rock that followed them; *and that Rock was Christ.*" Who can doubt it?

26. Who, does the Psalmist say, are given to Christ for a possession? Psalms, 2: 8.—"Ask of me and I shall give the *heathen for thine inheritance, and the uttermost parts of the earth for thy possession.*"

27. What will he do with them? *Ninth verse.*—"Thou shalt *break them with a rod of iron; thou shalt dash them in pieces like a potter's vessel.*"

28. What is said in Job in regard to the wicked? Job 18: 17, 18, 21.—"*His remembrance shall perish from the earth, and he*

shall have no name in the street. (18) He shall be driven from light into darkness, and *chased out of the world*. (21) Surely such are the dwellings of the wicked, and this is the place of him that knoweth not God." [Out of the world.]

29. But what does the Psalmist say in behalf of the righteous? Ps. 37: 29.—"The righteous shall inherit the land and *dwell therein forever*."

30. Once more, let us ask Daniel in regard to the nature of the "*Fifth Universal Kingdom*"? Dan 7: 27.—"And the kingdom and dominion, and the greatness of the kingdom under the whole heaven, shall be given to the people of the saints of the most High whose kingdom is an everlasting kingdom, and all dominions shall serve and obey Him." Thus, we see that the *inspiration of the Scriptures* is *vindicated* by comparing spiritual things with spiritual. Prophecy is history in advance. Further, we shall find that the Bible is not only "The Truth," but it is the whole truth, and the *breathings* of God through his chosen prophets. (See question No. 2, Second Pet. 1: 21.)

31. Then, what is God, or a transcript of his character? St. John 1: 1.—"In the beginning was the Word, and *the Word* was with God, and *the Word was God*."

32. What did the Word become? John 1: 14.—"And *the Word was made flesh*, and dwelt among us."

33. What was in the Word? (4th verse, 1st clause.) "*In Him was life*."

34. What was life? (4th verse, last clause.) "*And the life was the light of men*."

35. Can we get that *life* and *light*? 1, John 5: 12.—"He that hath the Son *bath life*; and he that hath *not* the Son of God *bath not life*."

36. How may we know that we have the Light and Life? 1, John, 2: 4, 5.—"He that sayeth, I know him, and keepeth not

his commandments, is a liar, and the truth is not in him.(5) But *whoso keepeth his word*, in him verily is the love of God perfected; *hereby know we* that we are in Him."

37. When shall we partake of this glory? *Col. 3: 4.—*
"When Christ who is our Life, shall appear, then shall ye also appear with him in glory."

Thus with the poet we may safely say,

"Westward the course of empire takes its way;
 The *first four acts* already past,
 A fifth shall *close* the drama with the day;
 Time's noblest offspring is the last."

Fully the inspiration of the Bible is vindicated by those only, who study and compare the way marks of history, sacred and profane.

But to evade the manifest fulfilment of the Scriptures, infidels and skeptics have affirmed an interpolation of the prophecies, and denied the *inspired infallibility* of the book we call the Bible. Therefore, before quoting largely from the book, let us examine its merits:

We will first commence with that which is apparent to all, and needs no proof. When were the *Evidences of the Inspired Word* written?

"First, there is an abundance of Bibles in the land to-day; nearly all the civilized nations of the earth accept it as the inspired word of God, and claim to found their laws on it, to some extent at least. It is estimated that about four hundred millions of people receive and believe it. Is there any other book so generally read, so generally loved, so widely diffused? If you cannot name any book which in these respects equals the Bible, then it stands out clear and distinct, and separate from all other authorship; and with an increased emphasis comes the question: Who wrote it?" *Fables of Infidelity*, p.82.

We will now trace this Bible back a little, questioning the

reformers and fathers for a few centuries: John Wesley, where did you get the Bible? Did you or your father get this up? "No, the Episcopal Church had the same book for two hundred years before I was born, just the same as I have it to-day."

"About three hundred years ago King James of England authorized some forty or fifty chosen men to translate the Bible into English; therefore was not he the author? No. Wycliff translated the Bible into English three hundred years prior to King James' time, and there is no vital discrepancy in the two. Three hundred and fifty years ago Martin Luther translated the same Bible into the German language, and this tells the same story; no interpolation yet. There are now nine hundred and seventy entire manuscripts of the Greek Testament, of which *forty-seven* are more than one thousand years old." History of the Bible by Prof. Stowe, p.63. Among them is the Vatican manuscript, written about A. D. 300.

"Here, then, we have accessible to us manuscript copies of the Greek Testament, the most ancient reaching to an age of fifteen centuries. The proudest and most costly architectural structures of men have, within that period, either crumbled and mouldered away, or become obsolete and unfit for their original use, though built of the most solid materials and put together with the utmost care, while we of this age can read the same fragile page of books which were in the *hands of men* forty-five and fifty generations before us." Prof. Stowe, p.78.

"It is about two hundred years from the death of the Apostle John to the first full manuscript we have of the whole New Testament, though we have fragments and quotations from the very earliest periods, from the time of John himself." From the above we see that the same Bible was written and read at least fifteen hundred years ago. But one very important era to notice was the Council of Nice, A. D. 325.

We quote the following paragraphs from the lectures of H. L. Hastings, editor of *The Christian*, Boston, on the "Inspiration of the Bible," as delivered to the Young Men's Christian Associations of Massachusetts, in the Town hall at Spencer, October 13, 1881:

"I have on my library shelves between twenty and thirty volumes, containing about twelve thousand pages of writings of different Christian authors who wrote *before* A. D. 325, when the Council of Nice was held. The books are full of Scripture. Those writers had the same books of Scripture which we have; they quoted the same passages which we quote; they quoted from the same books from which we quote. Origen, who wrote a hundred years before the Council of Nice, quotes five thousand seven hundred and forty-five passages from all the books of the New Testament. Tertullian, A. D. 200, makes more than three thousand quotations from the New Testament books. Clement, A. D. 194, quotes seven hundred and sixty-seven passages. Polycarp, who was martyred A. D. 165, after having served Christ for eighty-six years, in a single epistle quoted thirty-six passages. Justin Martyr, A. D. 140, also quotes from the New Testament, to say nothing of the heathen and infidel writers like Celsus, A. D. 150, and Porphyry, A. D. 304, who referred to and quoted multitudes of the very passages now found in the Scriptures which we have. Indeed, Lord Hailes, of Scotland, having searched the writings of the Christian Fathers to the end of the third century, actually found the *whole of the New Testament*, with the exception of less than a dozen verses, scattered through their writings, which are still extant; so that if at the time of the Council of Nice every copy of the New Testament had been annihilated, the book could have been reproduced from the writings of the early Christian Fathers, who quoted the book as we quote it, and who *believe it as we believe it*. And now infidels talk about the Council of Nice getting up a New Testament. You might as well talk about a town meeting getting up the Revised Statutes of the State of Massachusetts, because they say

they accept or receive them. *The Council of Nice did no such thing.* These books of the New Testament were received from the Apostle who wrote them, and were carefully preserved and publicly read in the churches of Christ long before the Council of Nice was held.

"Says Tertullian, A. D. 200: 'If you are willing to exercise your curiosity profitably in the business of your salvation, visit the Apostolic Churches, in which the very chairs of the Apostles still preside in their places; in which their very *authentic letters are recited*, sounding forth the voice and representing the countenance of every one of them. Is Achaia near you? You have Corinth. If you are not far from Macedonia, you have Phillippi and Thessalonica; if you can go to Asia, you have Ephesus; but if you are near to Italy, we have Rome.'

"These Apostolic Churches received the Gospel from the hands of the men who wrote them, and the Epistles were written and signed by men whom they well knew. Paul wrote: 'The salutation of me, Paul, by *mine own hand*, which is the *token in every Epistle*, so I write.'

"Now what did these men testify? They testified things which they *knew*. The Apostle John does not say: 'That which we have dreamed, imagined, or guessed at, that thing do we declare unto you;' but, 'That which was from the beginning, which we have heard, which we have seen with our eyes, which we have looked upon and our hands have handled, of the *Word of Life*.' (1 John 1:1.) This was their testimony. They testify that they *saw* Christ in His life and in His death; that they saw Him after His resurrection, and felt His hands and feet, and saw the nail prints and the spear wounds; and they knew these things and testified to them. They preached Christ who had died and risen again. When a certain skeptic said he proposed to start a new religion, and asked a friend for some suggestions as to his best course, the friend replied: 'I would advise you to *get yourself crucified, and rise from the dead the third day*.' No infidel has succeeded in doing this.

"Then the Apostles quote from the Prophets, and the Prophets quote from the Psalms, and refer to the law which

was given on Mount Sinai. And so we go back from book to book, until we reach the book of Genesis, and that does not quote from anybody or anything. You have here reached the fountain-head.

“ ‘But,’ says one, ‘I think the Bible may be a true history, but that is no proof of its inspiration. It does not require divine inspiration. It does not require divine inspiration to write a true story.’ So you think it an easy matter to tell the truth, do you? I wish you could make other people think so. Suppose you go and read a file of newspapers published just before the election (or the first reports just after), and see if you do not think it requires divine inspiration to tell the truth, or even to find it out after it is told. Truth is mighty hard to get at, as you can see by perusing the daily papers on the eve of an election.

“ ‘There are certain things in the Bible which, to my mind, bear the impress of divinity. A skeptic will tell you what a race of ‘old sinners’ we read about in the Bible. Noah got drunk; David was guilty of adultery and murder; Solomon was an idolater and wrought folly; Peter denied his Lord, and Judas sold Him for thirty pieces of silver. All these people that the Bible talks to us so much about are a pretty sort of men! Very well, what kind of men do you expect to read about in the Bible? Noah got drunk! Is that strange? Did no one else ever get drunk? Peter cursed and swore. Are there not men about here who curse and swear? Judas, an Apostle, sold his Lord, who said he had chosen twelve, and one of them was a devil. Do you not find a Judas in the Church even nowadays? One in twelve was a thief and a traitor then, and we need not be surprised if we find about the same average now. But you seem to think that when you read about a man in the Bible he is sure to be free from all kinds of errors, frailties, faults and sins. You have formed this idea of men from reading in Sunday-school books about good children, who usually die young, or perusing excellent biographies, which, as you read them, cause you to exclaim: ‘I wish I could be as good a man as he was, but I never shall.’ If you knew

the whole story about the man, you might not feel so deeply on the subject.

"Do you suppose that if the Bible had been revised by a committee of eminent divines, and published by some great religious society, we should ever have heard of Noah's drunkenness, of Jacob's cheating, of Paul and Barnabas' quarrelling, or of Peter's lying, cursing or dissembling? Not at all. The good men, when they came to such an incident, would have said: 'There is no use in saying anything about that; it is all past and gone; it will not help anything, and it will only hurt *the cause*.' [Applause.] If a committee of such eminent divines had prepared the Bible, you would have got a biography of men whose characters were patterns of piety and propriety, instead of poor sinners as they were.

"Sometimes a man writes his own diary, and it *happens* that he leaves out all the mean tricks he ever did, because he expects peradventure it may be printed after he is dead, but puts in all the good acts he can think of; and you read the papers with astonishment, and think, 'What a wonderful good man he was!' But when the Almighty writes a man's life He tells the truth about him; and there are not many who would want their lives printed if the Almighty wrote them.

"Suppose a young man goes, say from here to Boston. Perhaps he is a rich man's son, who has more money than was good for him at home, and who comes to the city to see the sights. He sails around the 'Black Sea,' and slips into various ports that are not exactly safe, and the next morning finds him hauled up before his Honor in the police court. You get the morning paper, and you expect to find the full particulars of the case. You do, do you? You find a paragraph on this wise: 'A certain young man from the rural districts came to town yesterday, sailed around in different parts of the city, and fell into rather bad company. This morning he was brought up before his Honor, who admonished him to be more careful in the future, and he departed a sadder and wiser man.' This is the kind of a paragraph you will find in the papers when a rich man's son comes to the city, goes on a spree, and gets his

head smashed and his eye banded in a fight. You don't get many particulars. But if he is a poor vagabond, without a second shirt to his back, you can get his name, and perhaps the genealogy for generations, and all the particulars of his case. This is the way *men write history*; but when the Lord undertakes to tell *His history* or *story* of a sinful man, He does not select a poor, miserable beggar and show him up. He does not give even the name of the guilty woman who bathed the Saviour's feet with her tears; but He takes King David from the throne, and sets him down in sackcloth and ashes, and wrings from his heart the cry: 'Have mercy upon me, O God, according to thy loving kindness; according to thy tender mercies blot out all my transgressions.'

"And when he is pardoned, forgiven, cleansed and made whiter than snow, the pen of inspiration writes down the dark, damning record of his crimes, and the king on his throne has not power, or wealth, or influence enough to blot the page; and it goes into history for infidels to scoff at for three thousand years. Who wrote that?

"You find a man who will tell the truth about kings, warriors, princes and presidents to-day, and you may be quite sure that he has within him the Holy Ghost. And a book which tells the faults of *those who wrote it*, and which says to you that 'there is none righteous, no, not one,' bears in it the marks of a true book; for we all know that men have faults and failings, and sins, and among all the men described in the book, *every man* whose life is recorded has some defect, some blot, *save one*, and that is 'the man Christ Jesus.'

"Men love objections, and so they say there are difficulties, absurdities, errors and contradictions in the Bible. We have all heard such assertions. After speaking once in the city of Boston, an ex-minister came to me and told me that the Bible was not true, for there was that story which Moses told about the quails. Israel lusted after flesh, and the Lord sent them quails to eat, and they fell by the camp a day's journey on each side, or over a territory forty miles across, and they were two cubits deep on the ground, and the Israelites ate them

for about a month. I have in my possession an infidel paper, which was published in Boston, in which there is about a column of arguments and figures on this 'quail story;' giving an estimate of the number of bushels of quails that were piled up over the country, and showing that when they were divided among the six million Israelites, each Jew would have 2,888,643 bushels of quails, which they were to eat during the month, giving each poor Israelite 69,520 bushels of quails to each meal during the month; and therefore, the Bible was not true!! That is the sort of food our skeptical friends like to eat. That is the meat on which these Cæsars grow so wondrous great. I said to this gentleman, 'The Bible does not say any such thing!' He replied that it certainly did; but, I answered that it did not say any such thing. He insisted that it did. 'Well,' said I, 'find it!' And when you ask an infidel to find anything in the Bible, you generally have him. He could not find the place; so I turned over to the eleventh chapter of Numbers, and there read that instead of the birds being packed like cordwood, on the ground, three feet deep, the account says that the Lord brought the quails from the sea, and let them fall by the camp, as it were, 'two cubits high,' or about three feet high upon or above the face of the earth. That is, instead of flying over head and out of reach, they were brought in about three feet high, where anyone could take as many of them as they chose. And this skeptical friend had to get the birds packed solid, three feet deep, over a territory forty miles across. As if some one should say that a flock of geese flew as high as Bunker Hill Monument, and we should insist that they were packed solid from the ground up to two hundred and twenty-one feet high! This is a sample of the kind of arguments which infidels bring to prove that the Bible is not true! The revelations of prophecy are facts which exhibit the divine conscience. So long as Babylon is in heaps, so long as Nineveh lies empty, void, and waste; so long as Egypt is the basest of kingdoms; so long as Tyre is a place for the spreading of nets in the midst of the sea; so long as Israel is scattered among all nations; so long as Jerusalem is trodden under foot of Geh-

tiles; so long as the great empires of the world march on in their predicted course,—so long we have proof that one omniscient Mind dictated that Book, and ‘prophecy came not in the olden time by the will of man.’ The authorship of the Book is wonderful.” End of H. L. Hastings’ lecture.

“After the endurance of pagan persecution for three hundred years on the part of the Christians, Constantine, the Roman Emperor, embraced Christianity. Three hundred and eighteen bishops of all nations, and many priests, were gathered at this council, the Emperor Constantine presiding in person. By this council the books of the Bible were investigated carefully, and published to the world. ‘Here,’ says the skeptic, ‘is opportunity for interpolation or Bible-making.’ Let us see how much truth, if any, in this statement.

“There did exist then, undeniably, in the year 325 large numbers of Christian churches in the Roman Empire (*which filled the world*), sufficiently numerous to make it politic, in the opinion of infidels, for a candidate for the Empire to *profess* Christianity; sufficiently powerful to secure his success, notwithstanding the desperate struggle of the heathen party; and sufficiently religious, or if you like, superstitious, to make it politic for an emperor and his politicians to give up the senate, the court, the camp, the chase, and the theatre, and weary themselves with long prayers and long speeches of preachers about *Bible* religion. How came it so? for these men, preachers, prince and people were brought up to worship Jupiter and thirty thousand gods of Olympus, after the heathen fashion, and left the care of religion to heathen priests, who never troubled their heads about books or doctrines, after they had offered their sacrifices.

“In all the records of the world there is no instance of a general council of heathen priests to settle the religion of the

people. The Council of Nice and the Emperor Constantine and his counsellors making a Bible, is proof of a wonderful revolution in the world's religion,—a phenomenon far more surprising than if the Secretaries of State, and the Senate and the President should leave the Capitol and post off to Boston to attend the meetings of a Methodist Conference, assembled to make a hymn-book. How did they all get religion? How did they get it so suddenly? How did they get so much of it? The infidel gives no answer, except to tell us that the austerity, purity and zeal of the first Christians, their good discipline, their belief in the resurrection and the general judgment, and their persuasion that 'Christ and His Apostles wrought miracles, had made a great many converts.' [Gibbon.] This is just as if I inquired how a great fire originated, and you tell me that it burned fast because it was very hot. What I want to know is how it happened that these licentious Greeks and Romans and Asiatics became austere and pure; how these frivolous philosophers suddenly became so zealous about religion; what implanted the belief of the resurrection of the body and of the judgment to come, in the skeptical minds of the heathen scoffers; and how did the pagans of Italy, Egypt, Germany and Britain come to believe in the miracles of one who lived hundreds of years before, and thousands of miles away, or to care a straw whether the written accounts of them were true or false? According to the infidel's account, the Council of Nice and the Emperor Constantine's Bible-making is a most extraordinary business—a phenomenon without any natural cause (and they will admit of no supernatural), a greater *miracle* than any recorded in the Bible.

"If we inquire, however, of the parties attending that council, what the state of the case is, we shall learn that they believed—whether truly or erroneously, we are not inquiring, but

they believed—that a teacher sent from God had appeared in Palestine two hundred and ninety years before, and had taught this religion which they had embraced. (Fables of Infidelity, pp. 87–88.) But a difference of opinion had grown up as to the exact nature of this teacher in whom they believed, whether he were an angel from Heaven or God Himself. They assembled to discuss this solemn question, and through the whole of the discussions *both sides* appealed to the writings of the Apostles, as being then well known, and of unquestionable authority with everyone who had part in the discussion. These facts, being utterly indisputable, are acknowledged by all persons, Infidel or Christian, at all acquainted with history. Here, then, we have the books of the *New Testament* at the Council of Nice well known to the world; and the council, so far from giving any authority to them, bowing *to theirs*,—both Arian and Orthodox, with one consent, acknowledged the whole Christian world and received them as the writings of the Apostles of Christ.

“There were venerable men of fourscore and ten at that council; if these books had been *first* introduced in their lifetime, they must have known it. There were men there whose parents had heard the Scriptures read in church from their childhood, and so could not be imposed upon with a new Bible. The New Testament could not be less than three generations old, else one or the other of the disputants would have exposed the novelty of its introduction from his own information. The Council of Nice then did not make the New Testament. It was a book well known, ancient, of undoubted authority among all Christians, *ages* before that council. ‘The existence of New Testament Scriptures, then, ages before the Council of Nice, is a great fact.’ (Fables of Infidelity, p. 70.)

“But as our work demands brevity, we pass over ninety-

nine hundredths of detail testimony and come to that of Polycarp, a pupil of the Apostle John, as found in Eusebius: 'If at any time I met with one who had conversed with the elders, I inquired after the sayings of the elders; what Andrew or Peter said; or what Phillip, Thomas, or James had said; what John or Matthew, or what any other of the disciples of the Lord were wont to say.' 'This writer gives a valuable testimony in regard to Gospels, Matthew and Mark, First Epistle of Peter and John. Also mentions the Acts and the Book of Revelation. Thus we have ascended to the Apostolic age. But we may reach still higher. We have in our possession the well-authenticated writings of four individuals and Fathers in the Primitive Church, who, because they were contemporary with the Apostles, are called *Apostolical Fathers*. Two of them, Clement and Hermas, are mentioned by name in the New Testament; the third, Polycarp, was an *immediate* disciple of St. John; the fourth, Ignatius, enjoyed the privilege of frequent intercourse with the Apostles. There is scarcely a book of the New Testament which one or another of these writers has not quoted or alluded to. Though what is extant of their work is very little, it contains more than two hundred and twenty quotations, or allusions to the writings of our sacred volume, in which they are uniformly treated with reverence, belonging to inspired books and entitled, 'The Sacred Scriptures;' 'The Oracles of the Lord.' (McIlvain's Evidences of Christianity, pp. 72-75.") 'Taken from Canright's Bible from Heaven.

Thus we have ascended the line of testimony into the presence of the Apostles. Our evidence has been collected from only a few out of the many witnesses that might have been cited. The argument is now, therefore, reduced to this: The Apostles and disciples of Christ are known to have left some writings. That these writings have been lost none can give a

reason for believing. It is not pretended that any other volume than that of the New Testament contains them. The books contained in this volume were considered to be the writings of the Apostles by the whole Christian Church, as far back as those who were their contemporaries and companions, being continually quoted and alluded to as such. It was impossible that such witnesses should be deceived. Contemporaries and companions must have known whether they quoted the genuine works of the Apostles, or forgeries pretending their names. Our evidence, therefore, is complete. What I have presented exceeds above measure the evidence for the authenticity of any other ancient book. Should the fifth part of it be required for the proof of the authenticity of any book of ancient Grecian or Roman origin, it could not abide the trial. But suffer a few more witnesses in regard to this wonderful book!!

First Written and First Printed Document.

“The decalogue containing the moral law (the Ten Commandments), is the very foundation and centre of the Holy Scriptures. And the moral law, engraved on stone by the finger of God, was the *first written* document on earth. The *Great Creator* set the first copy.” (See “Facts for the Times.”) Anderson says: “The first book ever printed on movable types was the Bible, in A. D. 1455.” Also, Dr. Adam Glark says: “They contain the *most ancient* writings in the world; the *decalogue* of Ten Commandments, a part of the book of Exodus, being probably the first regular production in alphabetical characters *ever seen by man*.” (See lb. p. 7, Clavis Biblica, p. 16.)

CHAPTER II.

Infidels and the Bible.

“**I**NFIDELS have attacked Christianity; but anything may be attacked. They have slandered her doctrines, ridiculed her Word, reviled her precepts, hated her holiness, and influenced many to go and do likewise; but neither hatred, nor reviling, nor slander is the test of truth. Have infidels ever resorted to the only fair and honest mode of meeting face to face the whole array of testimony which Christians advance by endeavoring coolly to prove, as a matter of historical evidence, that the authenticity of the New Testament and the credibility of its history are not sustained; that the miracles of Jesus have not been supported with adequate testimony; that the prophecies of the Scriptures have met their attestation in no accurate histories; that Christianity was propagated by human force alone, and its fruits are those of a corrupt and deceitful tree? I answer, no. There are such efforts in the books of infidelity. I read of speculations opposed to our facts; insinuations in answer to our testimonies; sneers in reply to our solemn reasonings; assertions where we demand arguments; levity and presumption where an advocate of truth would have been serious and humble. But I know of no such thing as a book so infidel in any sense corresponding in the nature, or grounds, or spirit, of its reasoning, with such arguments for Christianity as those of Paley, or Lardner, or Gregory, or Wilson, and a thousand others, to which not a man *ever dared to attempt an answer*. Infidelity, like an insect on the pillar of some stupendous temple, that can see no farther

than the microscopic irregularities of the polished marble beneath its feet, may busy itself in hunting for little specks in the surface of the stately edifice of Christianity; but it has no such eye, and takes no such elevated stand as would enable it to survey the whole plan, and judge of its pretensions by the mutual adaptation of its parts, the harmony and grandeur of its proportions. Infidelity is all speculation. Reduce it to a residuum of inductive reasoning, and you bring it to nothingness. Strip it of its several envelopes of ingenious hypothesis and bold assertion and scoffing declamation, and you find nothing left but a man of straw,—an ugly shape to keep the hungry from the bread of life, which you need only to approach to discover that it is made of rags and stuffed with nothingness." McIlvaine's Evidences, pp. 481, 482, 485.

"The most formidable and deceptive form of infidelity comes in the shape of 'philosophy.' Not that *true* philosophy or science opposes the Bible, but that men hide their infidelity behind the sciences; and men that know but little of science or the Bible, talk as learnedly of the absurdities and incongruities of the Bible as though they had committed it to memory, and speak as fluently of science as though they ordained the laws that keep the planets in their courses. Some think they have only to reject the Bible and call it a humbug and they are philosophers at once; that skepticism is an evidence of a great mind; that there is no surer proof of intellectual superiority than to treat all religion as a mere fable, fit only for the amusement of women and children. Hence come the groundless assertions concerning the Bible, which are so confidently repeated. These things are regarded as an evidence of having arisen above the common herd of mankind and outgrown their superstition. Would-be philosophers feel a kind of pride in plunging into the whirlpool of infidelity, while many great

minds tremble even to approach its brink. Many flatter themselves that they are fiends, who some day will be astonished to learn that they are only fools." Canright in Bible from Heaven, p. 284.

"Every little fledgeling which has scarcely left its nest, or the care of its mother, hastens through the spelling-book and primary reader, and then sets up for an oracle; discourses learnedly of spirit and matter, of the physical and moral worlds, the eternal and unbending laws of nature, the mysteries of time and space, the wonderful revelations of animal and spiritual magnetism, of the infinite and invisible; and deals with the profoundest questions of divine truth with more ease and familiarity, and not half the reverence, of a Jesus or a Paul. He speaks as though he had sounded all the depths of knowledge, with an air of unquestionable authority. He talks of things known and unknown—*mostly of the latter*. He uses borrowed formulas of speech, 'words of prodigious length and thundering sound.' He rises up into what he calls the spiritual view of all subjects. He expands and becomes more and more transparent, till the inflation is so great as to end in the usual results of the law of expansions, or he passes off out of sight into infinite fogdum, like the comet that became entangled among the moons of Jupiter, never regains his orbit again, which, perhaps, is little cause for regret. The comet is scarcely needed to light up our evening skies, and its presence will not be missed while the fixed stars continue to shine on in their everlasting beauty. Now we are ready to say that we have no reverence whatever for this kind of philosophers, nor for their philosophy. It is a broad burlesque upon the name. It does not come down into the earnest and solemn realities of life, and speak of our individual and social duties, relations and responsibilities. It spends itself in asking questions, which, if

answered, would lead to no valuable results. It apes the profound and mysterious. It occupies all its time in mere speculation, in weaving gossamer webs, and building rainbows on the overpassing clouds. It talks like a parrot, but never works, never makes itself useful. In a word, this folly, absurdly called philosophy, is a mere baby, not to say idiotic, babbling sheer nonsense mostly, intelligible neither to itself nor those who hear." Christianity vs. Infidels, pp. 6-8.

To the glory and triumph of the cause of Christ and His Gospel of Truth, we condescend to bring forward one or two or perhaps more of the renowned writers against the Bible and Christianity. It will not be necessary to give a lengthy *review* of any of these gentlemen, for they all arise to about the same altitude and use about the same logic, therefore a thorough refutation of one of these croakers which carries the trumpet and banner of the poorly-informed masses that follow in their wake will be quite sufficient. We will endeavor to give the reader the benefit of the judgment of qualified historians and scientists upon their standing before the enlightened world.

"Among the modern historians of Continental Europe Voltaire is the most widely known. His writings show great literary skill, with the power of quick, but not very deep penetration. His pen is often guided by a humane and enlightened philosophy, but it is as often misled by strong partialities. He exhibits, to an *undue* extent, his systematic hostility against established opinions and forms of society, in which he does not scruple to employ the *arts of misrepresentation*." Goodrich's History of All Nations.

Perhaps it is but justice, and therefore due to the apostle of European infidelity and his American admirers, to give a short biographical and yet synoptical description of the accompanying character. The record which we here give sketches

of will be found in *Encyclopædia Americana*, article Voltaire. "His influence was felt throughout Europe; and never did a man, by the force of his writings, obtain such power over his nation.



Voltaire.

Voltaire was born at Chatnay, near Paris, February 20, 1694. His father wished to see him a lawyer and advocate, but his love of literature and general study did not allow him long to devote himself to the law. He wrote poetry continually, and cultivated his talents in the company of men of much accomplishment and wit, but of little principle; such as Chaulieu,

the Marquis de la Fare, Marshal Villars, the Grand Prior of Vendome, the Prince of Conti, and others. He caught the tone of polished society which distinguishes his writings and which greatly contributed to his influence. His father was displeased with his mode of life and entreated the Marquis of Chateaufort, French Minister to Holland, to take the young Voltaire with him as a page. He consented, but Voltaire fell in love with the daughter of Madame Noyer, a refugee in Holland, and was therefore sent back to his family. In 1716 he was imprisoned in the Bastille on the charge of having written a satire against the Government. He remained in confinement a year and a half, and, in this situation, planned a poem upon the League, the result of which was the *Henriade*. He likewise improved the tragedy 'Ædipus,' which was brought upon the stage in 1718, and was performed forty-five times in

one year. Meanwhile, the poet had been released from prison in consequence of the real author of the satire having disclosed himself, but had been banished from Paris. In 1726 Voltaire was again imprisoned, at the age of thirty-two, in the Bastile. He had offended the Chevalier de Rohan, a proud young nobleman, who, in consequence, caused him to be beaten by his servant. Voltaire now learned to fence and challenged the Chevalier, whose relations thereupon procured an order for his imprisonment. At the end of six months he was released at the intercession of the Marchioness de Prie, the favorite of the Regent, who admired his poetical talents, but he was compelled to leave the kingdom. In 1728 he was permitted to return to France, where he put his effects into a lottery. By this, as well as by other fortunate speculations (he traded under the name of Du Molin and sent ships to Africa), he obtained great wealth, so that, after he came into the possession of the estates of his father, his income amounted to nearly 130,000 livres, which he employed in a praiseworthy manner; he particularly aided youthful literary talent. In 1730 he brought the tragedy of 'Brutus' on the stage. He afterwards attacked the pretensions of the Church with such vehemence in his *Lettres Philosophiques* that the Parliament of Paris condemned the book to be burnt, and an order was issued for the arrest of the author. He thereupon passed some years in concealment. He soon returned to his poetry and wrote, in 1736, his *Alzire*, and, in 1741, his *Mahommed*.... To the clergy he was particularly hostile, on account of their intolerance and persecuting spirit. But he often injured the cause of religion itself while he attacked its servants. His motives, moreover, were not always of the highest kind." [Inasmuch as ye have done it unto one of the least of these my servants, ye have done it unto me.—Christ.] "At the advanced age, February, 1778,

he returned once more to Paris. Here he found admirers and bitter enemies. He was sensible of the dislike entertained towards him, and therefore when stopped by the officers of the customs with the inquiry if he had any contraband goods with him, he replied: 'No, no; there is nothing contraband here but myself.' The inquiry of the King, on his arrival, as to the decree of Parliament being still in force against him made him uneasy, but nothing further was done to molest him. The actors waited on him in a body. 'We have come,' said they, 'to beseech you to inspire us with your odes.' 'I *live* only for you and through you,' was his answer; 'I have come to Paris to find my glory and my grave,'—a proof that he considered his dramas as his chief productions [of life], and, in truth, dramatic works were his last labors. The circumstances of his death have been related differently, but it is certain that Voltaire died without receiving the sacrament in the eighty-fifth year of his age, May 30, 1778. The Archbishop of Paris is said to have denied the corpse Christian burial, and it was therefore interred secretly at Scellaires, a Barnardian abbey, between Nogent Troyes. By a decree of the National Assembly (1791) his remains were placed in the Pantheon. in Paris.

"The exterior of Voltaire was quite characteristic. In his countenance, as has been said, there was a mixture of the eagle and the monkey; and, in character, he exhibited the boldness of the one with something of the malice of the other. Dupont has lately published an edition of Voltaire's works, in seventy volumes. A tolerably complete but perhaps not entirely impartial review of the numerous literary contests of Voltaire is given in the *Tableau Philosophique de L' Esprit de M. d Voltaire* (Geneva, 1771.)"

Thomas Paine.

We will now notice another character who was born about forty-three years this side of the renowned Voltaire's birth, and contemporary with him about thirty-four years, yet did not arise to that political eminence of his predecessor. Thomas Paine is best known to the world as the author of a book which everybody has heard of, but comparatively few have read. Few Christians have ever examined it, and to those only who are familiar with the Scriptures and on their guard, may the work be read with profit. One of Paine's biographical writers (Hugh O. Pentecost), who seems to be announcing Paine's publication as his prime object, says:—" 'The Age of Reason' is almost universally believed to be a book mainly directed against the Bible and the Christian religion, but it was written *not* for the purpose, primarily, of destroying Christianity, but to stem the tide of atheism in France that swept over it in the unhappy days of the Revolution."

We wish to do no man injustice by even quoting encyclopædias, but as we have Mr. Paine's work before us, we will give a few of his words as we find them, and let the readers judge for themselves; yet, it may be a question in the minds of some honest investigators, which is doing the greatest amount of harm: the openly and avowed infidelity or *avowed* Christianity, *falsely so-called*, which teaches anything but the unadulterated truth? But to return:

"I do not believe in the creed professed by the Jewish Church, by the Roman Church, by the Greek Church, by the Turkish Church, by the Protestant Church, nor by any church that I know of. My own mind is my own church." (Page 5, Age of Reason.) The worship of self is doubtless the great cause of a vast amount of infidelity. "The Resurrection and Ascension, supposing them to have taken place, admitted of

public and ocular demonstration, like the ascension of a balloon, or the sun at noonday, to all Jerusalem at least. A thing which everybody is required to believe; requires that the evidence of it should be equal to all, and universal. Instead of this, a small number of persons, not more than eight or nine, are introduced as proxies for the whole world, to say that they saw it, and all the rest of the world are called upon to believe it! But it appears that Thomas did not believe the Resurrection; and, as they say, would not believe without having ocular and manual demonstration himself. *So neither will I*, and the reason is equally as good for me, and for every other person, as for Thomas." 1b, p. 6. Just so: just as good for you as for Thomas, and no better. Christ said, "In the mouth of *two* or *three* witnesses every word shall be established;" and He is no respecter of persons. But Jesus said, "*Blessed* are they that *have not* seen, and yet *have believed*." (John 20:29.) Is not this a reproof for undue incredibility?

Rev. L. A. Lambert and R. G. Ingersoll, in "Notes on Ingersoll," by Rev. L. A. Lambert.

As the mass of the prime objections raised against the Bible and Christianity are covered in the comments of Rev. L. A. Lambert's "Notes on Ingersoll," we will let a few sketches from his Notes suffice.

Ingersoll—"What we know of the infinite is almost infinitely limited, but little as we know, all have a right to give their honest thought."

Comment—"Has any man the right, common sense being the judge, to talk about that of which his knowledge is almost infinitely limited? All may have an *equal* right to give their honest thought, but none have the right to give their honest thought on all subjects and under all circumstances. Common sense and decency forbid it. The honesty of thought does not give

weight, or importance, or truth to it. If so, lunatics would be the best of reasoners, for none are more honest in their thoughts than they. Thought must be judged with reference to the truth, and not with reference to the honesty of him who thinks it. This plea of honesty in thinking is a justification of every error and crime, for we must, in the very nature of the case, take the thinker's word for the honesty of his thought. Guiteau, if we can believe him, expressed his honest thought by means of an English bull-dog revolver, and if your theory be true, he had a right to do it. The right to give an honest thought implies the right to realize that thought in action and habit. If it means less than this, it means the right to gabble like an idiot. I assume that it is not this latter that you claim. Then, in claiming the right to give your honest thought, you claim to realize that thought in act and practice, and cause it, as far as you can, to permeate, and obtain in human society. If your claim for liberty of thought means less than this, it is the veriest delusion. I take it, then, that, in claiming the right to give your honest thought, you claim the right to promulgate that thought, and to put it in practice in the affairs of life. Now, in view of this claim of yours, I ask, by what right do you interfere with the slave-holder's honest thought, or the Mormon's honest thought? Your plea for the right of expressing honest thought is a miserable pretense, or else by it you mean that those only who *agree with you* have the right of expressing it in word or action. The doctrines of our loquacious liberals, when analyzed, will be found to mean precisely this and nothing more." P. 35, 36, Notes on Ingersoll.

Ingersoll—"Logic is not satisfied with assertion."

Comment—"Then it is not satisfied with your assertions in reference to it. But you are evidently ignorant of what logic means. Logic as a science deals with principles, not as-

sertions; and logic as an art deals with assertions only. Assertions are the subject matter on which it acts. It simply deduces conclusions from assertions or propositions called premises, and cares not whether these premises are true or false. Hence, the very reverse of what you say is true. Logic is satisfied with assertions, and knows and deals with nothing else. Your blunder arose from your confounding *reason* with *logic*."

Ingersoll—"In the world of science a fact is a legal tender."

Comment—"Then, before you can assert a legal tender you must demonstrate a fact. A fact must be established as such before it is legal tender. Now, the question between you and the Christian is this: What are the facts? The whole controversy rests on this question. What you offer as facts the Christian may reject as fallacies and sophistries, and what he offers as facts you may reject. It follows, therefore, that until both parties agree as to what are the facts they cannot agree as to what is legal tender. What you intended, then, as a wise saying has no practical sense in it. But for those who like that sort of thing it is about the sort of thing they will like."

Ingersoll—"A fact is a legal tender."

Comment—"A counterfeit is a fact; is it legal tender? Oh, no! Well, then, a fact is not a legal tender until it is known to be a fact. What is a legal tender? It is a promise to pay, which may not be worth ten cents on a dollar, but which the law compels you to accept when offered. Is this your idea of what facts are? And do you intend the facts offered by you to be received in that light? If so, perhaps you are right."

Ingersoll—"Assertions and miracles are base and spurious coins."

Comment—"If this be true, then the assertion you have just made is base and spurious coin. You say assertions are base and spurious. Is it because they are assertions or because they are false? If all assertions are base and spurious we can not believe anything whatever that is asserted, simply because it is asserted. I assert that two and two make four. This is an assertion. Is it false? It must be if what you say is true. From this it appears that you again failed to say what you meant, for you will certainly admit that *some* assertions are true—your own, for instance. Perhaps you meant to say that *false* assertions are base and spurious. If so, this is on a par with your legal-tender sophism and involves the same amount of meaningless verbiage. The truth or fallacy of an assertion must be established before you can assert it to be base and spurious. But the truth or fallacy of an assertion is the question now in debate. Let me illustrate: I make the assertion that the Christian religion is of Divine origin. You will observe that the truth or fallacy of this assertion is the point in debate, and to assert either one or the other without proof is to beg the question. This you do when you assert that assertions are base and spurious. But perhaps I have misunderstood you all this time. You 'probably think' that all assertions favoring Christianity are base and spurious, while those against it have the true ring. If you mean this you should have had the 'courage of the soul' to say it, and not hide your insinuation under a meaningless, common-place phrase. I notice you are fond of making curt little maxims, which on examination mean nothing, unless when they cover a fallacy."

Ingersoll—"Miracles are base and spurious coins."

Comment—"That depends. And here I must make the same distinction I made in regard to assertions. If a miracle is a fact, it is not base and spurious." [The devils have power

to deceive some that dwell on the earth by the means of his miracles that he had power to perform. See Rev. 13: 14, 16: 14.] "Now the fallacy of a miracle is the point in debate. Until that point is settled, not by assertions, but by valid arguments, you cannot say that it is spurious, for when you make that assertion you simply beg the question. . . . A sign of conscious weakness." Pages 54-57, Notes on Ingersoll.

We will ask the reader to follow these two contestants but a *few pages*, as the issue before us is one of which many have been misled in their conclusions as to the God of the Bible. This review covers in substance the *viperous hissings* of all who have heretofore brought forth what they have claimed the injustice of the God of the Bible.

We will quote a sentence or two from Paine's "Age of Reason" as it is of the same nature and refers to the points that Ingersoll does:

Paine—"When we read in the books ascribed to Moses, Joshua, etc., that the Israelites . . . put all those nations to the sword; that they spared neither age nor infancy; that they utterly destroyed men, women and children; that they left not a soul to breathe. . . . Are we sure that these things are facts? Are we sure that the Creator of man commissioned these things to be done? Are we sure that the books that tell us so were written by His authority? . . . The Bible tells us that these assassinations were done by the express command of God. To believe, therefore, the Bible to be true, we must *unbelieve* all our belief in the moral justice of God; for wherein could crying or smiling infants offend." Age of Reason, p. 62.

Ingersoll—"He [God] ordered the murder of *millions*."

Comment—"He never *authorized* or *ordered* the murder of *anyone*, from Abel to Garfield. God is the author and *giver of life*, and those He places on this earth He can remove at His

will. No man has a right to live one instant longer in this world than his Creator wills him to remain, be he yet unborn or innocent or guilty. As creatures of God we are absolutely His, and can have no rights whatever against Him. . . . Now, He who has the absolute right to transpose man from one state of being to another has equally the right to select the method of his removal, whether by old age, disease, the deluge, the sword, or by what we call accidents. By whatever method man is withdrawn from this life's fitful fever, his death is in pursuance of the original sentence passed on the race by an infinitely just Judge. This sentence awaits you, and your philosophy will not obtain you a stay of proceedings or an exemption.

"But, to return. He who has the absolute right to take or give life cannot be guilty of *murder* in taking it, for murder is an unjust killing, and there is no unjust killing in the taking of life by Him who has the absolute right to take it." [God is the *source of all life*, animate or inanimate, and there is no other source of life from man in His image, to the beast or a spear of grass.] "There is no escape from this reasoning, except by denying the absolute right, and you cannot deny this but by denying God's existence, for on the hypothesis that He exists He is Creator, and, being Creator, the absolute right of dominion over His creatures necessarily follows.

"Then, in the last analysis, to deny this right is to deny God's existence. But you cannot logically deny His existence since you say in your lecture on "Skulls" that you do not know whether He exists or not.

"I have dwelt at some length on the absolute right of dominion of the Creator over His creatures, because you harp on what you call His murders through your whole article. It was *unjust killing* that God forbade, and the destruction of that

guilty people was just, because ordered by Him who had the absolute right to order it, whether guilty or not. As to the Canaanites, they were guilty of death. The unparalleled wickedness and filthy abominations of the seven nations of Palestine, commonly called Canaanites, were such as to make their national expulsion or extermination a just punishment and a useful lesson to other nations. The nature of their crimes may be found in the eighteenth chapter of Leviticus. Read the chapter and you will understand why the Lord held these *beastly* people in abhorrence. The Mormons and the Oneida Communists are as pure as the driven snow in comparison with them. To give the reader an idea of their incredible debasement, I quote some verses from the end of the chapter wherein God warns the Hebrews not to imitate their example: 'Defile not yourselves with any of these things with which all the nations have been defiled, which I will cast out before you. And with which the land is defiled; the abominations of which I will visit: that it may vomit out its inhabitants. Keep ye my ordinances and judgments and do not any of these abominations. For all these detestable things the inhabitants of the land (Canaanites, Amorites,) have done that were before you, and have defiled it. Beware of them, lest in like manner it vomit you also out, if you do like things, as it vomited out the nation that was before you. Every soul that shall commit any of these abominations shall perish from the midst of his people.'

"The abominations are described in the first part of the eighteenth chapter. Read it carefully that you may know the abominable wretches you sympathize with.

"The author of the Book of Wisdom describes some of the sins of those people and justifies their punishment in words that I cannot do better than to quote:

“ ‘Thou chastisest them’ that err by little and little; and admonishest them, and speakest to them, concerning the things wherein they offend; that leaving their wickedness they may believe in thee. For those ancient inhabitants of the Holy Land, whom thou didst abhor because they did works hateful to thee by their wicked sorceries and wicked sacrifices, and those merciless murderers of their own children, and eaters of man’s bowels, and devourers of blood from the midst of thy consecration; and those parents sacrificing with their own hands helpless souls, it was thy will to destroy by the hands of our parents. . . . Yet, even those, thou sparedest as men, and did send wasps as forerunners of thy host, to destroy them little by little. Not that thou wast not able to bring the wicked under the just by war, or by cruel beasts, or with one rough word to destroy them at once; but executing thy judgment by degrees thou gavest them place of repentance, not being ignorant that they were a wicked generation, and their malice natural, and their thought could never be changed. . . . Neither didst thou for fear of anyone give pardon to their sins. For who shall say to thee: What hast thou done? or, who shall withstand thy judgments? or, who shall come before thee to be a revenger of wicked men? or, who shall accuse thee if the nations perish which thou hast made? . . . For so much, then, as thou art just, thou orderest all things justly, thinking it not agreeable to thy power to condemn him who deservest not to be punished. For thou showest thyself when men will not believe thee to be absolute in power, and thou convincest the boldness of them that know thee not. But thou, being master of power, judgest with tranquility, and with great favor disposeth of us, for thy power is at hand when thou wilt. Thou hast made thy children to be of good hope, *because in judging thou givest place for repentance for sins.* . . . But they that were

not amended by mockeries and reprehensions experienced the worthy judgment of God.' (Wisdom, chapter 12.)

"Here we find these people whom you beslaver with your gushing sympathy were sorcerers, murderers of their own children, offering them with their own hands in sacrifice to idols and man-eaters. On the other hand we learn the merciful way in which Jehovah warned them and gave them time and place for repentance. When they rejected His mercy He punished them with justice, and, for doing this, you accuse Him of *murder!* Those who, knowing the crimes of this people, condemn Mormonism and Oneida Communism, and yet you volunteer to advocate those bestial Sodomites of Canaan whose unnatural disgrace fell on the race to which they belonged and contaminated the land which God had given them to dwell in."

"A fellow feeling makes us wondrous kind."

Ingersoll—"He (God) gave captive maidens to gratify the lust of captors."

Comment—"I flatly deny the truth of the statement given above and appeal to the only record that can give us any record on the subject, namely, the Old Testament. The Hebrew military laws *did not* abandon captive women to the insolence or brutality of captives. On the contrary, they made special provisions forbidding the first familiarities of the soldier with his captives. If you study the twenty-first chapter of Deuteronomy, verses 10-14, you will learn that the soldier was obliged to make the captive his wife, or respect her person and honor. Instead of tolerating that licentiousness which the customs and laws of other nations authorized, the laws of the Hebrews kept the soldier in restraint.

"The pagan nations of that time allowed every familiarity with captives, and after they were sold as slaves, or given to the lust of slaves. This was strictly and specifically forbidden

by the Hebrew law. And, yet, in the face of all this, you have the effrontery to charge the Almighty with permitting the Jews to do that which he forbade, and which they, alone, of all ancient nations, prohibited by strict and specific laws. What will honest men of common sense think of a philosophy that has to be propped and bolstered up by such shameless misrepresentations of history?"

Ingersoll — "He (God) sent abroad lying spirits to deceive his own prophets."

Comment — "I will give one hundred dollars to the poor of this village if you or any of your disciples will make good your statement. I am familiar with the texts in Kings and Ezechiel which you probably *imagine* will bear you out, but if you carefully compare those texts with your statement you will find that your zeal has ran away with your discretion, and that your hatred of your Maker is more intense than your love for truth.

"God abhors lying spirits, false prophets, false philosophers and deceivers of all kinds, ancient and modern, and yet he permits them to exist because he cannot make them impossible without destroying free will or human liberty. There were laws enacted condemning the false prophets and other popular seducers, but these laws were not enforced because the false prophets, etc., flattered the passions of the people, telling them pleasant things. They were *popular lecturers* in their day, and they did not die without issue." [Or childless.] Rev. L. A. Lambert's Notes on Ingersoll, pages 35-75. By permission of copyrighters.

CHAPTER III.

Geology of the Bible.

WE now reach the questions: 1. Does Geology overthrow the Mosaic record of creation? 2. Does the Bible stand on geological science? 3. Or does Science stand on the Bible?

In order to illustrate these interrogations the writer knows of no better plan than to give in substance, a dialogue that he took part in while in a social conversation with a friend in Toledo, Ohio. Mr. S——, we will denominate the skeptical and would-be geologist and scientist, says: "You Christians do not read the Bible aright; of course you read it as it is, and understand it as you have been taught."

True, Mr. S——, 'tis education that forms the common mind. Just as the twig is bent the tree's inclined. But, Mr. S——, what is wrong about our understanding the Mosaic record?

"You Christians understand the earth and all that was in existence in Adam's time, to have been created in six literal twenty-four-hour days, whereas, geology demonstrates this false; and further proves that these days were immense long periods; there are petrified trees found in California, whose grains count more years than the Mosaic record allows; with your version of the matter."

Now, Mr. S——, I suppose that you believed in some kind of an intelligence that created man in the entirety?

"Yes."

Did he create him a full-sized man? Or was he an infant and finally grew to the stature of a man?

"I do not believe in the Darwin theory; therefore, I believe that when man came into existence he was as complete in all respects as at the present time."

Mr. S——, you would not suppose that it would be any more wonderful, or any more of a miracle for the Creator to make a full sized tree, with its numerous grains, diversified leaves and fruit, than it was to make man?

"N-o. For it was on the third period that God said: 'Let the earth bring forth its grass, the herb yielding seed, and the *fruit tree* yielding fruit after his kind, whose seed is in itself upon the earth; and it was so.' Gen. 1: 11, 13. And, further, if these days were long periods of thousands of our years, then there was ample time for all these herbs and trees to mature and yield fruit after their kind."

Then, Mr. S——, I suppose you would not admit of these periods being less than a thousand years each?

"No, sir, not less than fifteen thousand each."

Then, Mr. S——, let us take the Bible and read the affirmation at the close of each of these periods of creative work, substituting your version for the literal.

"Very well."

For brevity in reaching the points we will only read the last verse, or a portion of it, commencing at Gen. 1: 5. "And God called the light day, and the darkness He called night. And the evening and the morning were the *first fifteen thousand years.*"

Eighth verse. "And God called the firmament Heaven. And the evening and the morning were the *second fifteen thousand years.*"

Thirteenth verse. "And the evening and the morning were the *third fifteen thousand years.*"

But let us pass on to the *sixth* and *seventh* periods. Verse

31. "And God saw everything that he had made, and, behold, it was very good. And the evening and the morning were the *sixth fifteen thousand years*." = 90,000.

Thus the heavens and the earth were finished and *all the host of them*. And on the seventh "*fifteen thousand years*" God ended His work which He had made; and He *rested on the seventh fifteen thousand years* from all His work which He had made. And God blessed the "*seventh fifteen thousand years*" and sanctified them because that *in them He had rested* from all His work which God created and made.

These are the generations (account or pedigree) of the heavens and of the earth when they were created, in the day (or time) that the Lord God made the earth and the heavens." Genesis 2: 1-4 inclusive.

Now, in order to ascertain definitely what governed the length of these days, we have only to refer to the closing declamation of each period or day: "*the evening and the morning.*"

What did God call the *dark* and the *light*? Genesis 1; 5.
Ans. Day and night.

What did God give to govern and rule the day and the night? "And God said, 'Let there be lights in the firmament of the heaven to *divide* the day from the night; and let them be for signs, and for seasons, and for days and years.' And God made two great lights; the greater light to rule the day, and the lesser light to rule the night; He made the stars also." Genesis 1: 14-16.

Now, it must be manifest to every unbiased mind what kind of a *day* or *period* the Lord is talking about. We go to Exodus, 20: 11, and find the same time brought to view. "For in six days the Lord made heaven and earth, the sea and all that in them is, and rested the seventh day: wherefore the Lord

blessed the Sabbath day and hallowed it." ("To hallow" to set apart for a holy purpose—*Webster*.)

But what does God command *man* to do in regard to these days on which the Creator labored? Ninth verse: "Six days shalt thou labor and do all thy work." A long period of toil before rest—90,000 years!

And how about rest, given to man, which was to commemorate the Creator's work? Let us read the tenth verse: "But the seventh day is the Sabbath of the Lord thy God; in it thou shalt not do any work, thou, nor thy son, nor thy daughter, nor thy man servant, nor thy maid servant, nor thy cattle, nor the stranger that is within thy gates." So we see the *rest* that was assigned to man, if the days be understood as geologists claim, would reach *far beyond* the age of man. A very long rest!!

Perhaps there are some people nowadays who were born tired and would be fond of such a rest.

Thus we may see the object of Satan to overthrow the Mosaic record of creation and the Sabbath—the *memorial* of the Creator's works. But the effort is a failure. God says, "I change not."

Geology and Astronomy, Its Popularity vs. Bible.

We think we have said sufficient in favor of the infallibility of the Bible to be free in using it as a reference for evidence on any subject on which the Word may treat. But should the skeptic yet require more, we know of no better way to test the infallibility of the Word than for him to take the prophecy of Daniel, chapters two, seven, eight and nine, concerning the four Universal kingdoms, with many details concerning them; also the prophecy concerning the first and second advent of Jesus Christ. Compare these with history, and if you have a desire for *truth* you can get it in abundance.

We now propose to give some of the popular views of Geology and Astronomy as quite generally believed and taught by the supposed scientific and Christian world, after which we shall let the *Word* speak.

The Bible was not given to teach the science of geology nor astronomy, neither does it make such claims; yet when it speaks "we do well to take heed." "Knowing this first that no prophecy of the Scripture is of any private interpretation. For the prophecy came not in old time by the will of man, but holy men of God spoke as they were moved by the Holy Ghost." 2 Peter 1: 20, 21.

Creation of the World, etc., According to Popular Scientists.

"Creation of the world, 4,000 before Christ, Julius Africanus says 5,508; Samaritan Pentateuch, 4,700; Septuagint, 5,872; Josephus, 4,658; Talmudists, 5,344; and others give different times, but the Chinese tradition and *history* claim an antiquity of 100,000 years before Christ. From geological formations and from workings of rivers like the Niagara and the Danube through the Iron Gate in the Alps, it can be estimated at an age of *millions* of years. The creation itself, or the accumulation of enormous quantities of matter in the large planets, must have required millions of years. No body, however small, has been instantly created. [Forbidding the power of the Almighty.] Creation is the work which consists of the three physical elements — force, motion and time — by which bodies grow like a tree, or by gradual accumulation of matter. These three physical elements constitute the Trinity which governs the material universe. All creation, or action of whatever kind, whether mechanical, chemical or derived from light, heat, electricity or magnetism — all that has been and is to be done or undone — is accomplished by this Triune function. It is

Omnipotent, ubiquitous and eternal."—Nystrom's *Mechanics*, page 498.

This is the result and conclusion that thousands are led to who follow the Newtonian system of gravitation, geology or astronomy. You may say that the above is absolute infidelity; so says any true lover of God's Holy Word. But let us look at the words of a "*Connecticut Pastor*," *Ecce Cœlum* or *Parish Astronomy*, by Burr. This popular and extremely eloquent work, published by the American Tract Society, 150 Nassau Street, New York, some seven or eight years since the present writing, 1893, had reached its twentieth edition. On page 183 he says: "All of Kepler's and Newton's laws are as operative to-day as they ever have been since their discovery. The planets shoot round the sun and are circled by their own moons, on substantially the same elliptical orbits, in the same times, and with the same principles of alternate retardation and acceleration as of old." Again, on page 185: "*Repeatedly has the earth been drowned and torn in pieces. It has been piled with snow and ice from pole to pole. It has been all ablaze and fused. And is it not on the idea of such a conflagration that we can best account for the new stars that have sometimes flashed suddenly on the sight with all the splendor of Venus at its brightest, and, after a few months of changing color and gradual decay, finally disappeared.*"

But how about the earth's having been repeatedly drowned? How about God's covenant with Noah? Gen. 9: 11-15: "And I will remember my covenant with you: and I will remember my covenant, which is between Me and you and every living creature of all flesh; and the waters shall no more become a flood to destroy all flesh."

And we will notice another display of crazed sublimity, page 189: "Geometry declares that no element of decay,

within, endangers the stability of the system of the world. The year which circumscribes our seasons is only three hundred and sixty-five days; but the earth has another year to which this is a mere point—its pole goes nodding through space in a circle which it takes twenty-five thousand years to traverse. What think you of a planet whose *winter* is more than forty of our years, of a comet whose year is more than thirty of our centuries, of a sun whose year is more than eighteen thousand of our milleniums (or thousands)? All the planetary orbits pass through cycles of changes, varying in length from a few centuries to nine thousand, to seventy thousand, to even many million years; but the greatest of these planetary cycles are as nothing compared with those enormous periods which bound the perturbations and express the secular equations of the sun and fixed stars—periods including more years than *imagination* has ever succeeded in realizing to itself. What amazing longevities! What portentous numerals! They are hieroglyphics of the everlasting. They lift us among the dizziest peaks of the sublime." Yes, and far beyond. Satan has lifted man in his own estimation of wisdom to a far greater height than he did the Saviour when he set him on the pinnacle of the temple, or when he "took him up into an exceedingly high mountain and showed him all the kingdoms of the world in a moment of time." When Satan lifts man he is ready to exclaim: "All this have I gotten by the *might of my power*." But when God causes man to behold the glories of the Eternal he exclaims in humility: "I beheld things unlawful for man to utter;" or, like Daniel: "For my comeliness was turned in me into corruption and I retained no strength." God's plan is: "Pride goeth before destruction and an haughty spirit before a fall;" "before honor is humility." We will next notice the contrast between the popular view, the "Newtonian and Kep-

ler" system and the Mosaical record, of creation and the longevity of man.

**The Mosaical Record of Creation Contrasted with the
Popular Views.**

Let it ever be remembered that the Mosaical record of creation is neither a type, shadow nor symbol of any act ; neither is any part of the record of creation so claimed by theologians, except in some instances in the case of the seventh day, on examination of which we shall find that it was instituted as a *memorial* to man of the act performed by the Creator.

Let it also be borne in mind that "the prophecy came not in olden time by the will of man, but holy men of God spake as they were moved by the Holy Ghost." Second Peter 1: 21.

We feel that we have said sufficient and given sufficient quotations of a reliable source, to establish *the infallible evidence of the book called the Bible* ; yet it may be of interest and profit to notice other most common objections, those quite universally taught by leading scientists, and, therefore, believed by the masses. We now purpose to proceed, using as freely as the limits of this work will allow, quotations from said book on which we build and establish *our faith and hope*. It seems to me, that the creative act is the highest display of omnipotent power of which mortals can conceive. Truly, "the heavens declare the glory of God, and the firmament sheweth His handiwork. Day unto day uttereth speech, and night unto night sheweth knowledge. There is no speech nor language where their voice is not heard." Ps. 19: 1-3. When we personify the mighty work of the Creator we are led to exclaim with Paul: "O, the depth of the riches both of the wisdom and knowledge of God! How unsearchable are His judgments, and His ways past finding out!" Rom. 11: 33.

Had God's memorial ever been *universally* observed, man's adoration would have been upon the Creator, as the prime object of His worship and the *inevitable* results would have been that there never would have existed an *Idolater*, an *Atheist* nor an *Infidel*.

To undertake to search out the ways of the Almighty would be an act worse than folly by any of His created beings, but what He has been pleased to reveal in His word He has given to us and to all generations. (See Deut. 29: 29.)

David informs us that "the works of the Lord are great, sought out [or looked into] of all them that have pleasure therein." And further says: "He hath made His wonderful works to be remembered." Ps. 111: 2, 4. And at the completion of His works of creation He established a *memorial* of the acts He had performed. "And God blessed the seventh day and sanctified it, *because* that in it he had rested from all His work which God had created and made." Gen. 2: 3. And these are the words which he spake from Sinia amid the thunderings, lightning and smoke, which made an impression never to be forgotten. And this is His memorial: "Remember the Sabbath day to keep it holy." Ex. 20: 8. And why are we to remember it? "For in six days the Lord made heaven and earth, the sea, and all that in them is, and rested *the seventh day*; wherefore, [*for this very reason*,] the Lord blessed the Sabbath day, and hallowed it." Ex. 20: 11. Do you ask how long this memorial of creation was to last, and was there nothing to take its place? Let the inspired Word answer. Christ says: "Till heaven or earth pass, one jot or one tittle shall in nowise pass from the law." "Thy name, O Lord, endureth forever, and thy memorial, O Lord, *throughout all generations*." Ps. 135: 13. "Thy Word is true *from the beginning*, and every one of thy righteous judgments endureth

forever." Ps. 119: 160. "My covenant will I not break, *nor alter* the thing that has gone out of my lips." (Ps. 89: 34.) "Know ye not that Jehovah, he is God; it is He that hath made us, and not we ourselves." Ps. 100: 3.

In giving the evidence concerning the inspired Word, I feel that, knowing what I do, "woe is me" if I give it not correctly. The *honest* difference of opinions that men may have in regard to the teachings of God's Word, they must settle between themselves and their God. It is not for me to say, or to announce to you what God means when He speaks, but if we have proven that God has spoken; then we have proven that He has spoken to you as well as to me, "by the mouth of all His holy prophets since the world began (Acts 3: 21), for this Word is unto us and our children forever." We believe that God's Word is its own expounder, and if others think differently, they have the same inalienable right as the author, and the same judge to whom accounts must be rendered. Our purpose is, and shall be, to *prove* the *Word* and *give* the *Word*; and we shall endeavor to do this by "rightly dividing the Word of truth;" neither "adding unto nor taking from" (Rev. 22: 18, 19), and leave the results to the reader.

The scientific principles of "*All Past Times*," the records of all eclipses and transits in cycles, each in their order, since the record of man on the earth, will be given in the future progress of this present work; not for the purpose of establishing a *creed* nor the avowed faith of any creed or set of men, but for the benefit and interest of all such as may be benefitted by the facts—let them come from Jew or Gentile, or an Infidel historian.

We understand that if our sins and mistakes are confessed, they are taken by our High Priest, Jesus Christ, our advocate, and that they are placed back on the head of the anti-typical

scape-goat, the devil, and he suffers the penalty. But if we carry our own sins and mistakes we alone must be responsible for them; thus we lessen the punishment of his Satanic majesty by taking the responsibility of the results on our own shoulders.

How was the World Framed? Out of What was it Made?

The eleventh chapter of Hebrews is a record of the wonderful deeds of faith. "Through faith we understand the worlds were framed by the Word of God, so that things which are seen were not made of things which do appear." Heb. 11: 13.

It is here emphatically declared that God framed the worlds out of that which did not previously exist. It is impossible for our finite minds to grasp this wonderful declaration.

To comprehend this, or how an infinite power could accomplish the feat, we can only go back some six thousand years in the past, and from that date, in our minds-eye, view the vast abyss of ethereal space, the "outer darkness," the void now filled with the lights of Heaven. What can we behold? Simply blank — nothing. The host of heaven, the stars, did not then exist. "Without form and void (Gen. 1: 2), how were the heavens made?" Ans. "By the Word of the Lord were the heavens made, and *all the host of them* by the breath of His mouth. For He spake and it was done; He commanded and it stood fast." (Ps. 33: 6, 9.) The highest act of faith that we can conceive of is a Being who has called into existence the universe out of nothing. To believe this great truth we must credit the sacred Scriptures; for Paul tells us that "faith cometh by hearing, and hearing by the Word of God." (Rom. 10: 19.) The world is full of infidelity and atheism. These have no faith in the Mosaic record of creation. To the latter the rest day of the Creator, as a memorial, is of

no importance whatever. But with those who believe the Mosaic record, and their works correspond with their faith, it will be, and ever is, different. Those who believe, and their works do not correspond with their faith, have simply a dead faith. "Devils believe and tremble." If we believe it to be true that the six days of creation were long periods of thousands of years each, then the inconsistency of the Christians' God is manifest to the atheist and all others in requiring of man to *rest one* or *labor six* of those periods or days. But if you are inclined to "limit the Holy One," and say that "a twenty-four-hour day is insufficient to the task of any of the works that were wrought within the specific periods," we say, true. If the work of creation be the work of Nature all of eternity would be insufficient for the work. But if we will take the above record, "He spake and it was done, he commanded and it stood fast," then the time would be ample. We only have to turn back two or three pages, in this chapter to get the contrast of the "popular views."

Purpose of Creation.

"God Himself hath formed the earth and made it; He hath established it; He created it not in vain; He formed it to be inhabited." Isaiah 45: 18.

And the Psalmist says: "The heaven, even the heavens, are the Lord's; but the earth hath he given to the children of men." (Ps. 115: 16.) God will not be foiled in His purpose; when the earth is redeemed from the curse it will not then be inhabited by a race of rebels, but by the righteous. "For such as be blessed of Him shall inherit the earth, and they that be cursed of Him shall be cut off." Ps. 37: 22.

Now, we ask if God specified in particular for what purpose He made the sun, moon and stars? "And God said, 'Let there be lights in the firmament of the heaven to divide

the day from the night; and let them be for signs, and for seasons, and for days and years; and let them be for lights in the firmament of the heavens *to give light upon the earth,* and it was so." Gen. 1: 14, 15.

But did not God make some of these to be inhabited? Which shall we believe? The Mosaic Record, by the man of God, who calls the *moon a light* (Gen. 1: 14-16), or the heathen Pythagorus who died before Christ 506, who was an idolator—a worshipper of the sun? And regarding the *common source of nature* as the essence of Deity on the authority of Pythagorus, Newton said that the moon had no light of itself; also that the day was caused by the sun. Moses says that light was divided from the darkness the first day, and the day and night were both made on the first period or day. Gen. 1: 4, 5. These periods or length of days were governed by these lights.

It seems that God has been particular to specify for what purpose these lights were made, and that purpose was, at least, twofold: First, for lights in the firmament of the heaven "to divide the day from the night;" second, "for signs and for seasons, and for days and years." As we understand, for the measurement and rules of time, something, if you please, by which man may reckon his time and the mariner his approximate whereabouts on the great seas.

Other Worlds than This.

To this thought there need be no reasonable objection while there is positive and demonstrated evidence that there is one or more worlds, and they are inhabited by people in the form of men and in the image of the Creator, the image of Him who said that "He made all things, and without Him was not anything made that was made." (John 1: 3.) These beings have been seen and handled, have lodged and ate with mortals,

and returned to their homes from whence they came. (See Gen. 18: 1, 2, 8; also Gen. 19: 1, 3, and many others might be given.) There is, therefore, no objections to there being other worlds *above*, hung upon nothing, or revolving or traveling through ethereal space; or founded without motion and established in ethereal space, sustained by the mighty power of God. To deny these facts would be to do violence to the Word and limit the Holy One. The psalmist says in speaking of the earth: "For He hath founded it upon the seas and established it upon the floods." Ps. 24: 2.

There is nothing said in the Holy Book of the limits of the *flood*, or *bounds* of the "*waters.*" (Gen. 1: 2.) They may be as boundless as ethereal space, ought we know, with other worlds on the same plane or the same waters divided by the everlasting mountains of congealed waters; and ice regions as the bounds with which God in His wisdom has placed between the rays of our sun and the worlds warmed by other bodies. "There is a path which no fowl knoweth, which the vulture's eye hath not seen; the lion's whelps have not trodden it, nor the fierce lion passed by it." (Job 28: 7-8.) "He hath *compassed* the waters with bounds until the day and night come to an end." Job 26: 10.

Travel from the north on any meridian line, or in any direction from the North Pole is South, and the terminus is the everlasting fields of ice. Go farther, if possible, and there awaits you, beyond the limits of the sun's rays, the Angel of death.

Do the Scriptures Teach that the Earth is a Globe.

We now purpose to give some *Scripture* evidence that the *earth is not a globe*, after which we propose to give, in the second part of this work, some *scientific* evidence, showing that the two do not antagonize each other when viewed in their proper light, or practically demonstrated.

That the Scriptures were not given to teach astronomy, geology or other sciences we do not believe. They were given to teach the *true* and only way of salvation. To claim that the Bible was not intended to teach science truthfully would be to declare that God Himself has stated and authorized His prophets to teach that which is utterly false! In giving the following we shall quote largely from an English writer, Parallax, of whom we shall say more ere we close this work.

"If the earth were a globe, it is evident that everywhere the waters of its surface, the seas, lakes, oceans and rivers must be sustained or upheld by the land, which must be underneath the water; but being a plane 'founded upon the seas,' and the land and the waters distinct and independent of each other, then the waters of the 'great deep' must sustain the land as it does a ship, an ice-island, or any other floating mass, and there must, of necessity, be *waters below the earth*." In the Newtonian astronomy, continents, oceans, seas and islands are considered as together forming one vast globe of 25,000 miles in circumference. This assertion will be seen to be entirely false, contrary to the plain, literal and manifest teachings of the Word of God.

"And God said, 'Let the waters under the heaven be gathered together unto *one place*, and let the *dry land* appear.' And God called the dry land *earth*, and the gathering together of the waters called He seas." Gen. 1: 9-10.

It would be an insult to an intelligent judge or jurors, or an audience, to claim before them that the manifest account of the Word of God and this accepted theory were in substance the same,

Do the Scriptures Teach that the Earth and Seas Constitute the Earth.

Instead of the word "earth" meaning both land and water, only the dry land is called earth (in the Scriptures), and the *seas* the gathering or collection of the waters in vast bodies. Earth and the great bodies of water are described as two distinct and independent regions, and not as together forming one great globe, which modern astronomers call "the earth." This description we shall confirm by several other passages of Scripture: "The earth is the Lord's and the fullness thereof; the world and they that dwell therein; for He hath founded it upon the seas, and established it upon the floods." Ps. 24: 1, 2.

"O give thanks to the Lord of Lords, that by wisdom made the heavens, and that stretched out the earth *above* the waters." (Ps. 136: 6.) "By the Word of God the heavens were of old and the earth standing out of the water and in the water." Second Peter 3: 5.

"Who with his strength fixed the heavens; and *founded the earth upon the waters.*"—Hermes' N. T.

"That the surface of the water is horizontal," says Parallax, [and we purpose to scientifically prove it in our second part] "is a matter of absolute truth, and as the earth is founded upon the seas and stretched out above the waters, it is of necessity a plane; and being a concrete mass of variable elements and compounds, with different specific gravities, it must be a floating structure, standing in and out of the waters, just as we see a ship or an iceberg."

I have heard argued at considerable length, by different ones, the following passage of Scripture, supposing it to teach the idea of the earth a globe suspended in void space: "He stretched out the north over the empty place, and hangeth the earth upon nothing." Job. 26: 7.

We have examined Dr. A. Clark on this passage, and he being a Newtonian philosopher, says the literal translation is, "On the hollow or empty waste;" and he gives the Chaldee version as his preference, which says: "He layeth the earth upon the waters, nothing sustaining it."

The rendering would convey this idea. He layeth it upon the waters which were previously empty or unoccupied by earth; nothing visible.

"Thou shalt not make unto thee any graven image or any likeness of anything that is in heaven above or that is in the earth beneath, or that is in the *water under the earth*." Ex. 20: 4.

But let us notice a few more Scripture quotations:

"Thus, saith the Lord, which giveth the sun for a light by day, and the ordinance of the moon and stars for a light by night, which divided the sea when the waters thereof roar, the Lord of Hosts is His name. If these ordinances depart from before me, saith the Lord, then the seed of Israel also shall cease from being a nation before me *forever*. Thus saith the Lord: If heaven above *can be measured* and the *foundation of the earth* searched out beneath, I will cast off all the seed of Israel for all that they have done, saith the Lord."

Says Parallax on the above: "It is certain that God's promises to His people can no more be broken than can the height of heaven be measured, or the depths of the mighty waters—the earth's foundations—searched out or determined."

The fathomless character of the deep beneath, upon which the earth is founded, and the infinitude of heaven above, are here given as the emblems of the boundlessness of God's power and of the certainty that *all* of His ordinances will be fulfilled.

When God's power can be limited heaven above will be no longer infinite; and the "mighty waters," the "great deep,"

the "foundation of the earth," may be fathomed. But the Scriptures plainly teach us that the power and wisdom of God, the heights of heaven and the *depths of the waters upon the earth*, are alike boundless and unfathomable.

Does the Earth Move or Rotate ?

The earth is stationary, and *nowhere* in the Scriptures is the earth spoken of as movable, except by a miracle or in a relative sense. And, on the other hand, the sun is not spoken of in the Scriptures as standing still, as fixed or having foundations, except it be by a miracle of God. The concentric and progressive motion of the sun over the earth is in every sense practically demonstrable; yet, the Newtonian astronomers insist upon it that the sun only *appears* to move, and that this *appearance* arises from the motion of the earth; that when, as the Scriptures affirm, "the sun stood still in the midst of the heavens," it was the earth that stood still and not the sun; that the Scriptures, therefore, speak falsely, and the experiments of science and the observations and applications of our senses are never to be relied upon! Whence comes this bold and arrogant denial of the value of our senses and judgment and authority of Scripture? A *theory* which is absolutely false in its ground-work, and ridiculously illogical in its details demands that the earth is round and moves upon axis, and in several other directions (as we shall show further on), and that these motions are *sufficient to account for* certain phenomena without requiring the sun to move; therefore, the sun does not move, but is a fixed body—his motion is only apparent! Such *reasoning* is a disgrace to philosophy, and fearfully dangerous at the best, to the religious interests of humanity. A few passages of Scripture here will suffice to confirm the above statements:

"In the heavens hath He set a tabernacle for the sun, which is as a bridegroom coming out of his chamber and rejoiceth as a strong man to run a race. His going forth is from the end of the heaven, and his circuit unto the end of it." Ps. 19: 4-6.

"The sun also ariseth, and the sun goeth down, and hasteth to his place where he arose." Ecclesiastic 1: 5.

"Let them that love the Lord be as the sun when he *goeth forth* in his might." Judges 5: 31.

"The sun *stood still* in the midst of heaven and *hasted not to go down* about a whole day." Josh. 10: 13.

"Great is the earth, high is the heaven, *swift* is the sun *in his course*, for he *compasseth* the heavens round about, and fetcheth his course again to his own place in one day." Esdras 4: 34.

Of Importance to the Religious World.

To the religious world this matter is most important—it becomes a sacred question of vital importance; it is complete in the confirmation of the entire Scriptures wherever referred to.

Does the Sun Move?

Says Parallax, p. 366: "In the religious and mythological poems of all ages and nations the fact of the sun's motion is recognized and declared." Christians especially, of every denomination, are familiar with and often read and sing with delight, such poetry as the following:

"My God, who makes the sun to know
His proper hour to rise,
And to give light to all below
Doth send him round the skies.

"When, from the chambers of the East,
His morning race begins
He never tires nor stops to rest,
But, round the world he shines.

"God of the morning, at whose voice
The cheerful sun makes haste to rise,
And like a giant doth rejoice
To run his journeys through the skies;
He sends the sun *his* circuit round
To cheer the fruits and warm the ground."

The above single verses are merely examples of what may be found in every hymn-book and collection of sacred poetry throughout the world. The sacred books of all nations, and the perceptions and instincts of the whole human race completely accord in respect to the motion of the sun and the convexity of the earth; and theoretical astronomy fails to present a *single fact* or experiment to support the contrary conclusion.

Christian and Jewish ministers, teachers and commentators find it a most unwelcome task to *reconcile* the plain and simple philosophy of the sacred Scriptures with the monstrous and contradictory teachings of modern theoretical astronomy. Dr. A. Clark, in a letter to his friend, the Rev. Thomas Roberts, of Bath, replying to questions as to the progress of the commentary he was then writing and his endeavors to reconcile the statements of Scripture with the Newtonian astronomy, says:

"Joshua's sun and moon *standing still* have *kept me going* for nearly three weeks! That one chapter has afforded me more vexation than anything I have ever met with; and even now I am but about *half satisfied* with my own solution of all the difficulties, though I am confident that I have removed mountains that were never touched before. Shall I say that I am heartily weary of my work — so weary that I have a thousand times wished I had never written one page of it, and am repeatedly purposing to give it up?" Life of Dr. A. Clark, 8vo. edition.

The Rev. John Wesley, in his Journal, writes as follows. "The more I consider them the more I doubt of all the systems of astronomy. I doubt whether we can with certainty know either the distance or magnitude of any star in the firmament; else why do astronomers so immensely differ, even with regard to the distance of the sun from the earth? Some affirm it to be only three and others ninety millions of miles." Extracts of Works of Rev. J. Wesley, third edition, 1849, by Moses London, p. 392, Vol. 2. In Vol. 3 of the same edition, p. 293, the following entry occurs:

January 1, 1765.

"This week I wrote a warm letter published in the *London Magazine*; the author thereof is much displeased that I presume to doubt of the modern astronomy. I cannot help it; nay, the more I consider the more my doubts increase, so that at present I doubt whether any man on earth knows either the distance or magnitude, I will not say of a fixed star, but of Saturn or Jupiter—yea, of the sun or moon."

In Vol. 13, p. 359, referring again to theoretical astronomy, he says: "And so the whole *hypothesis* of innumerable suns and worlds moving round them vanish into air."

Page 430 of the same volume, the following words occur: "The planets' revolutions we are acquainted with, but who is able to this day to *demonstrate* either their magnitude or distance, unless he will prove, *as is the usual way*, the magnitude from the distance and the distance from the magnitude."

In the same paragraph, speaking of the earth's motion, he says: "Dr. Rogers has evidently demonstrated that no conjunction of the centrifugal and centripetal forces can possibly account for this, or *even cause any body to move in an ellipse!*"

"There are several other incidental remarks in his writings which show that the Rev. J. Wesley was well acquainted with the Newtonian system of astronomy, and that he saw clearly

its non-contradictory and anti-Scriptural character. The supposition that the heavenly bodies are suns and systems of inhabited worlds is demonstrably false and impossible in nature, and certainly has no counterpart or foundation in Scripture." Parallax.

CHAPTER IV.

General Summary of Conclusions, Inevitable from Evidences Produced in Previous Chapters.

IN giving these conclusions we shall use the sentiments largely of Parallax and his words verbatim where they accord with evidence produced in the first part of this book.

At the close of this work we propose to give a synoptical biography of this noted philosopher, the author of "Zetetic Astronomy and Philosophy," whom we have quoted so largely, and to whom the world owes a tribute far greater than to a Newton, Galileo, Copernicus or Kepler. The quotations will be found on pages 375-406 of his work, "Zetetic Astronomy."

The Stars.

By Newtonians, are assumed to have positions so far from the earth that the distance is almost inexpressible; figures, indeed, may be arranged on paper, but in reading them no practical idea is conveyed to the mind. Many are said to be so distant that should they fall (to the earth), with the velocity of light 160,000 miles per second, or 600,000,000 of miles per hour, they would require nearly 2,000,000 of years to reach the earth!" Sir William Herschel, in a paper on "The Power or Telescopes to Penetrate into Space," affirms that with his powerful instruments he discovered brilliant luminaries so far from the earth that the light which they emitted could not have been less than *one* million, nine hundred thousand years in its progress! Here again a difficulty is manifest; viz., if the stars begin to fall to-day, and with the greatest imaginable velocity,

that of light, 160,000 miles in a second, millions of years must elapse before many of them will reach the earth. But the Scriptures declare that these changes will occur suddenly—shall come, indeed, “as a thief in the night.”

Chronology.

These statements, to those who have any faith in them, destroy the sense of all Scriptural authorized chronology. Christian and Jewish commentators (except the *astronomically* educated) hold and teach, on Scripture authority, that the earth as well as the sun, moon and stars were created about 4,000 years before the birth of Christ, or less than 6,000 years before the present time. But if many of these luminaries are so distant that it requires nearly two millions of years to reach the earth, and if, as is affirmed, bodies are visible to us because of the light which they reflected or radiated more than two millions of years, at their creation, and therefore they must have been shining and must have been created at least nearly two million years ago! This chronological theory is further demonstrated and published in this book from a work of scientific merit styled “All Past Time,” by J. B. Dimbleby, editor of “The British Astronomical and Chronological Association,” of London, England.

But the chronology of the Bible, unless by unwarrantable interpretation, teaches that the period of six thousand years has not yet elapsed since “the heavens and the earth were finished, and all the host of them!” And all was done in six literal twenty-four hour days. See Gen. 2: 1,2.

Sun, Moon and Stars as Lights.

“This modern theoretical astronomy also affirms that the moon is a solid, opaque, (non-luminous) body; that it is,

in fact, nothing less than a material world. It has even been mapped out into continents and islands, seas, lakes, volcanoes and volcanic regions; and the nature of its atmosphere (or its surface, supposing as many do, that an atmosphere cannot exist), and the character of its productions and possible inhabitants have been as freely discussed and described as though our philosophers were as familiar with it as they are with the objects on the earth. The light, too, with which the moon beautifully illuminates the firmament, is declared to be only borrowed—to be only the light of the sun, intercepted and reflected on the earth. These notions are not only opposed by a formidable array of well ascertained facts, but they are totally denied by the Scriptures. The sun, moon, and stars are never referred to as *worlds*, but simply *lights* to rule alternately the day and the night, and to be “for signs and for seasons and for days and years.”

Glory of the Heavenly Bodies.

Does the moon shine with a borrowed light?

“There is one glory of the sun, and one glory of the moon, and another glory of the stars, for one star differeth from another star in glory.” 1 Cor. 15: 41.

“And God said let there be *lights* in the firmament of the heaven to divide the day from the night. . . . And God made *two great lights*; the greater light to rule the day, and the lesser light to rule the night.” (Gen. 1: 14-16) “O give thanks unto Him that made *great lights*, . . . the sun to rule by day; . . . *and the moon and stars to rule by night.*” Ps. 136: 7-9.

“The sun is given for a light by day, and the ordinances of the moon and of the stars for a light by night.” Jer. 31: 35.

“I will cover the sun with a cloud, and the moon shall not give her light by night. All the bright lights of heaven I will make dark over thee.” Ezekiel 32: 7, 8.

"Praise Him, sun and moon; praise Him all ye *stars of light*." Ps. 148: 3.

"The sun shall be darkened in His *going forth*, and the moon shall not cause *her light to shine*." Isa. 13: 10.

"Immediately after the tribulation of those days shall the *sun be darkened*, and the moon shall not give *her light*." Matt. 24: 29.

"The sun shall be no more thy light by day, neither for brightness shall the moon give light unto thee.... Thy sun shall no more go down, neither shall thy moon withdraw itself." (Isaiah 60: 19,20.) "... While the sun, or the light, or the moon, or the stars be not darkened." Eccl. 12: 2.

"The light of the moon shall be as the light of the sun, and the light of the sun shall be sevenfold." Isaiah 30: 26.

"And for the precious fruits brought forth by the sun, and for the precious things put forth by the moon." Deut. 33: 14.

Nothing is here said, nor is it said in any other part of the Scriptures that the sun *only* is a great light, and that the moon only shines by reflection. The sun is called "*greater light* to rule the day," and the moon the "*lesser light* to rule the night." Although of these two *great lights* one is less than the other, each is declared to shine with its own independent light. Hence, in Deut. 33: 14, it is consistently affirmed that certain fruits are developed by the influence of the sun's light only, and certain other productions are put forth by the moon.

That the light of the sun is influential in encouraging the growth of certain natural products and that the light of the moon has a distinct influence in promoting the increase of certain other natural substances, is a matter well known to those who are familiar with horticultural and agricultural phenomena; and it is abundantly proved by chemical evidence that the two lights are distinct in character and in their action on various

compounds. In no single instance are the two lights confounded, or regarded in the same character. On the contrary, positive statements are made to their difference in nature and influence. St. Paul affirms emphatically that "There is one glory of the sun and another glory of the moon, and another glory of the stars, for one star differeth from another in glory."

1 Cor. 15: 41.

"The sun became black as sack-cloth of hair and the moon became as blood." Rev. 6: 12.

If the moon has a light of her own, the above language is inconsistent, but if she is only a reflector, the moment the *sun* becomes "black as sack-cloth of hair," she could not remain as blood while the sun was thus blackened.

Up and Down—Do they Exist Farther than Relative Terms.

"God has spoken to man in two voices—the voice of *Inspiration* and the voice of *Nature*. By man's ignorance they have been made to disagree, but the time will come, and cannot be far distant, when those two languages will strictly accord; when the science of Nature will no longer contradict the science of Scripture." Professor Hunt in *Parallax*, p. 383.

According to Newtonians there is neither up nor down from the earth; shall we accept their teachings and chance the results of believing a *lie*; or, shall we take the numerous statements of the prophecy of all the prophets, which "came not in olden time by the will of man, but holy men of God spake as they were moved by the Holy Ghost?" (Second Peter 1: 20, 21.) If we accept the former theory we may *discard our own senses* and let the theory of accepted scientists have full control, and say that there is neither large nor small, round or square, a straight line or a curve, white or black; but if we use our own God-given senses, believe our own eyes, then

we have that which the Apostle Peter says was "more sure" [the never failing Word of God.] Peter states that they had "not followed cunningly devised fables, but were eye-witnesses of His Majesty;" and a "voice" from heaven came to confirm their sight and faith; and what he considered made the matter doubly sure was the Word of God "by the Holy Ghost." (See Second Peter 1: 16-21.) More than a score of passages could be given in this case that absolutely antagonize and forbid the Newtonian theory, but we will let a few suffice.

"So then after the Lord had spoken unto them [Peter, James and John] He was received *up* into heaven." Mark 16: 10.

"For as the heaven is high *above the earth*." Ps. 103: 2.

"Elijah went *up* into heaven." 2 Kings 2: 11.

"Look *down* from thy holy habitation, from *heaven*, and bless thy people Israel." Deut. 26: 15.

"And the Lord came *down* upon Mount Sinai." Ex. 19: 20.

If the earth is a globe, according to the Copernican hypothesis, it necessarily must revolve in order to get the sun's rays on all parts, and it is evident to the most simple that the revolution is made complete every twenty-four hours. Therefore, that which is "up" at any *given hour of the day* would be "down" at the same hour of the night. This would make the above quotations a senseless jargon, and the Scriptures necessarily false. We readily see that at whatever point or moment we fix our eyes upwards, in less than one second we are moving our sight rapidly downwards. Before a sentence could be uttered, expressive of any object on which our eyes could rest that might be called "above," they would be millions of miles from the first position. The Lord says: "For my thoughts are not your thoughts, neither are your ways my ways, saith the Lord. For as the heavens are 'higher' than the *earth*, so are my ways higher than your ways, and my thoughts

than your thoughts." (Isaiah 55:89.) He that made the heavens and the earth makes no mistakes, neither does He inspire men to do so. "No lie is of the truth." (Second John 2:21.) And the truth is *no part* of a lie.

If we cannot believe Moses and the prophets we would not believe though one rose from the dead. Rather: "Let God be true and every man a liar." Rom. 3:4.

If we say that God inspired men to use their own language and thoughts it simply destroys the inspiration, and where is the standard for truth?

CHAPTER V.

The Ancients; Their History. Early Astronomers, Sages of the Present System.

THE authors of the present system of astronomy were the following, as quoted from the "Encyclopædia Americana:"

"Nicholas Copernicus, born at Thorn, on the Vistula, February 19, 1473.

"Tycho (Tyge) Brahe, born at Knubstrup, in Schonen, a province then subject to Denmark, in 1546; he died in 1601, aged fifty-five.

"Galilei Galileo, born at Pisa, Italy, in 1564; died January 8, 1642, aged seventy-eight.

"John Kepler, born at Weil, in Wurtemberg, in 1571; died in Ratisbon in 1650, aged sixty-one.

"Sir Isaac Newton, born December 25, 1642, at Lincolnshire, England; he died at Westminster, March 20, 1725, aged eighty-four.

"The history of astronomy begins with the most remote antiquity. The starry heavens must have been one of the first and most striking objects which attracted the attention of man, and his immediate wants compelled him to attend to the revolutions of the seasons, changes of the moon, etc. The *most ancient astronomical observations* known to us are the Chinese. Such an one, mentioned by Montucla (p. 455 of his work, Vol. 1), as follows: 'A conjunction of Saturn, Jupiter, Mars, Mercury and the moon occurred about 2,500 before our era.'

"The Chaldeans also boast of some very ancient astronomical observations, but Ptolemy only mentions two lunar

eclipses observed by them about 700 B. C. Still less importance does he ascribe to the astronomical knowledge of the Egyptians, although the placing of their pyramids in a position exactly facing the four cardinal points of the compass, the Zodiacs discovered in Egypt, and other circumstances are by no means calculated to give us such a disadvantageous idea of it.

“The theory of Bailly, a later historian of astronomy, respecting a nation settled in Middle Asia and possessed of profound astronomical knowledge, seems as unfounded as our acquaintance with Indian astronomy is slight. The science made great progress in Greece, and the Greek philosopher, Thales, born 640 B. C., calculated a solar eclipse. Pythagoras, also seems to have been possessed of astronomical knowledge. After him the Athenian, Meton, 433 B. C., introduced the famous *lunarcycle of nineteen years*, at the end of which time the new moon appears *on the same day of the year as at the beginning of it*, since nineteen solar years constitute very nearly 235 lunations, a discovery which was then regarded as so important that the calculation was engraved in letters of gold, whence the number which marks the year of the cycle is still called the *golden cycle*. Great progress was made in astronomy under the Ptolemies, and we find Timocharis and Aristillus employed about 300 years B. C. in making useful planetary observations. But they were far surpassed, in philosophical spirit, by Aristarchus of Samos, born 267 B. C., who, according to the indubitable evidence of Archimedes, taught the *double motion of the earth* around its axis and around the sun. About 100 years after him, Hipparchus determined more exactly the length of the solar year, the eccentricity of the sun's orbit, the precession of the equinoxes, and even undertook a catalogue of the fixed stars. From the time of Hipparchus a

chasm exists in the history of astronomy till the second century after Christ, when Ptolemy compiled a complete system of astronomy in thirteen books, which is best known under the name of 'Almagest, given by the Arabians, who translated it into their language in 827, and which, as the Ptolemaic system of the world, notwithstanding its many errors exposed in the article 'Universe,' this work has maintained its value down to the latest times.

"Among the Romans, on the contrary, astronomy was never much esteemed, and no astronomical discovery had its origin with them, though it must be observed that expressions occur in Seneca's questions of Nat., respecting comments which are worthy of a riper age; and the service likewise deserves mention which Julius Cæsar rendered.

"But with the irruption of the Barbarians on one side and the destruction of the Alexandrian library on the other, such a total stagnation occurred in the case of astronomy, as in that of the sciences in general, that we find no traces of astronomical study and observations till the ninth century, among the Arabs, whose translation of Ptolemy's works has already been mentioned.

"But we must not overrate the merits of the Arabian astronomers, since they confined themselves entirely to the system of Ptolemy and confounded the science with the dreams of astrology; though, on the other hand, the benefits which they have rendered by valuable observations of the fixed stars (many of which is well known still bear Arabic names), of eclipses, of the obliquity of the ecliptic, etc., and by the preservation of ancient mathematical works, which have come to us in their translations, are not to be forgotten.

"Among the Christian nations during this time a deep igno-

rance generally prevailed, but the cultivation of the astronomical sciences was not neglected.

“Thus the Emperor Fredrick II., who died in 1250, caused the *Almagest* (the Greek original being no longer extant) to be translated from the Arabic into the Latin, and King Alphonso of Castile about the same time invited to his court several astronomers and commissioned them to prepare a new set of astronomical tables, which, under the name of *Alphonsine tables*, has acquired much celebrity, but in the seventeenth century differed a whole degree from the true situation of the celestial bodies.”—*Encyclopædia Americana*, pp. 434, 435.

We pass over several less important and less famous names in order to reach those on whom the present universally accepted system of astronomy *stands or falls*.

We shall notice these first in their chronological and contemporary order as they become notorious with the science of astronomy—much of it fabulous or falsely so-called.

In giving a synopsis of those who have been foremost in the promulgation and origin of this system, it will be our *special purpose* to see if there is an infallible evidence produced by any of these sages to prove the globular theory of the earth, which, of necessity, required axial and orbital motion.

“The first of the so-called *bright lights* in the cause was Nicholas Copernicus, born at Thorn, on the Vistula, February 19, 1473.

“‘*Theoretical*,’ says Webster: Speculation, speculative; not practical.”

“The Copernican *theory* was admitted by him to be merely assumption and not necessarily capable of demonstration. The following are his words: ‘It is not necessary that a hypothesis should be true or even probable; it is sufficient that

it leads to the result of calculation which agrees with calculation. Neither let anyone, so far as hypothesis are concerned, *expect anything certain from astronomy* since that science *can afford nothing of the kind*, lest, in case he should adopt for truth things feigned for another purpose, he should leave this science more foolish than he came.'

'The hypothesis of the terrestrial motion was *nothing but an hypothesis*, valuable only so far as it explained phenomena, and not considered with reference to absolute truth or falsehood.

"Copernicus assumed that the sun was the center of the system; that the earth was a planet, also Mars, Venus, Mercury, Jupiter, Saturn, etc. That these revolved around the sun in the time as given herewith: Mercury in eighty-seven days, Venus in 224, the Earth in 365, Mars in one year and 321 days, Jupiter in eleven years, and Saturn in twenty-nine years; reckoning these years and fractions according to our standard, or earth's time.

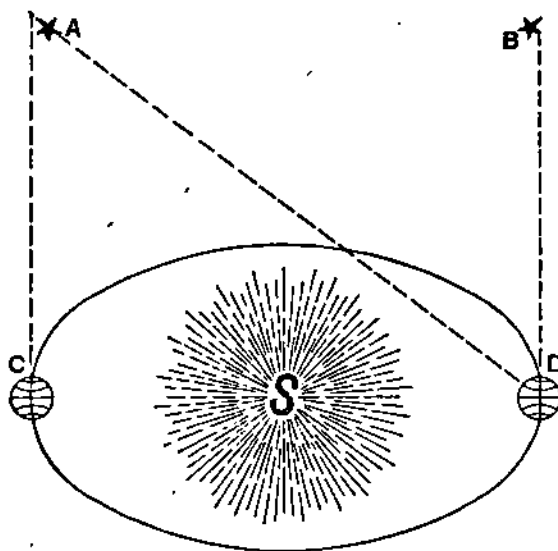


Fig. 3.

"The Copernican theory also required in its terrestrial motion that the earth moved in an elliptical path round the sun, as here represented by diagram. S, is the Sun; C, the earth in June; D, its position in December.

"When desired to offer some proof of this orbital motion he suggested that a given

star should be selected for observation. The first observation C. to A., was recorded; an observation again at the end of six months, when the earth was supposed to have

passed to D, the other extreme of its orbit; to the astonishment of the assembled astronomers the star was observed in exactly the same position, D. B., as it had been six months previous.

“It was expected that it would be seen in the direction of D. A., and the observation would demonstrate the earth’s motion from C. to D., and also furnish with the distance, the elements necessary for calculating the actual distance of the star A. to B.

“The above experiment has many times been tried and always with the same general result. No difference whatever has been observed in the lines of sight, C. A. and A. D., whereas every known principle of optics and geometry would require that if the earth had really moved from C. to D.; the *fixed star* A. should be seen in the direction D. A.

“The advocates of this hypothesis of orbital motion, instead of being satisfied from the failure to detect a difference in the angle of observation, that the earth could not possibly have changed its position in the six months, were so regardless of all logical consistency that instead of admitting and accepting the consequences they, or some of them, declared that they could not yield up the theory, on account of its explaining certain phenomena, but demanded that the star A. was so vastly distant, that, notwithstanding that the *earth must have moved* from C. to D. this great change of position would not give a readable difference in the angle of observation at A., or in other words the amount of parallax (annual parallax it was called) was not perceptible.

“Since the period of the above experiments many have declared that a very small amount of yearly parallax has been detected. But the proportion given by different observers has been so various that nothing definite and satisfactory can yet

be decided upon. Tycho Brahe, Kepler and others rejected Copernican theory, principally on account of the failure to detect any parallax or displacement of the fixed stars. Dr. Bradley declared that what many called parallax was merely aberration. In the year 1839, Mr. Henderson having returned from filling the position as royal astronomer to the Cape of Good Hope, and discussing a series of observations made here with a large mural circle of the bright star 'A Centauri,' announced as a positive fact the measurable parallax for that star; the parallax assigned to A Centauri, is so very nearly a whole second in amount [$0''.98$] that we may speak of it as such, 98-100 of a second. It corresponds to a distance from the sun of 18,918,000,000,000 statute miles. Others have put the parallax of a star in Cygnus $0''.35$, $0''.51$, and $0''.57$. This corresponds to somewhat less than twice the distance of A Centauri or to nearly thirty-eight billions of miles.

"It might seem to a non-scientific mind that the difference above referred to of only a few fractions of a second in the parallax of a star constitutes a very slight amount, but these differences involve differences of millions of miles as will be seen by the quotation from the *Edinburgh Review* for June 1850:—

" 'The rod used in measuring a base line is commonly ten feet long, and the astronomer may be said only to apply this very rod to measure the distance of the fixed stars! An error in placing a *fine dot*, which gives the length of a rod, amounting to one five-thousandth part of an inch, will amount to an excess seventy feet in the earth's diameter; of 316 miles in the sun's distance, and to 65,200,000 miles in that of the nearest fixed star!'

"The second point to which we would advert is, that as the astronomer in his observatory has nothing to do with ascertaining length as distance, except by calculation, his whole

skill and artifice is exhausted in the measurement of angles. For it is by these that spaces inaccessible can be compared." Parallax, pp. 81-87.

Happily, *a ray of light is straight*. [Yes, and so is the *line of sight*; we cannot look around the corner or over an object that obscures the vision.] Were it not so there were an end of our astronomy. It is as inflexible as adamant, which our instruments unfortunately are not. Now, the angle of *one second*, 3,600th part of a degree, is a subtle thing; it is an apparent breadth, utterly invisible to the unassisted eye, unless accompanied by so intense a splendor, as in the case of the fixed stars, as actually to raise by its effect on the nerve of sight a spurious image, having a sensible breadth.

A silkworm's fiber, or a cobweb line used as a center or vertical and right angle in the telescope, thus: subtends an angle of one second at three and one-half feet distance from the eye. A ball two and one-half inches in diameter must be removed in order to subtend an angle of one second, 43,000 feet, or about eight miles, while it would be utterly invisible to the sharpest sight aided even by a telescope of 100 powers.

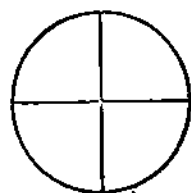


Fig. 4.

Yet it is on the measurement of *one single second* that the ascertainment of a *sensible parallax* in any fixed star depends; and an error of one-thousandth of that amount (a quantity still immeasurable by the most perfect of modern astronomical instruments, would place a fixed star too far or too near by 200,000,000 of miles!

From the "Encyclopædia Americana," advocates of the Copernican theory of the spherical motion of the earth, we copy the following: "Of the actual magnitude and distance of the stars we know nothing. The diameter of the earth's orbit is 2,000,000,000 miles, yet we can detect no difference in

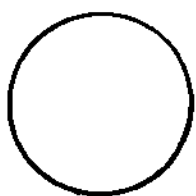
their apparent places, viewed from the opposite points of this diameter. A change of place amounting only to a second would be detected by the accuracy of modern observations; geometrical considerations, therefore, prove that the nearest star cannot be *less* than twenty billions of miles distant from us."

Sufficient has been said in this chapter to show the complexity, uncertainty and unsatisfactory state of the question of mobility or yearly parallax of the earth, as hypothetically advocated by Copernicus and held to by modern astronomers and scientists in general, to forever annihilate by actual demonstration the evidence of any motion in an orbit around the sun. We can find as great a parallax, and just as certain and satisfactory, if not more so, by taking a ten-foot pole for a base line, as we can from the earth's orbit, two hundred millions of miles in diameter! Our space and time is limited, yet we can not refrain from giving an illustration of the evidence of the motion of the earth and measurements of distances of the stars, etc., as found in the *Commercial* of Buffalo, N. Y., taken from an English magazine, January 19, 1888:

Measuring the Stars.

"To learn the distances of the stars, it is first necessary to determine what is known as the star's parallax, or its angle of direction when viewed from two opposite points in the earth's orbit, and this is what renders the problem so extremely difficult, for nearly every star that has been examined for the purpose of learning its distance has failed to show *any parallax whatever*, and in the few instances where a parallax has been recognized the angle has been found to be exceedingly small. *No star* in the heavens has a parallax equal to *one second* of arc, but all thus far determined are below even this small angle."

The star which gives the greatest parallax of any, and is believed to be the nearest to our earth is Alpha Centauri, a first magnitude star in the heavens and never visible in our latitude. But even this star's parallax is only ninety-three hundredths of a second, which corresponds to a distance of 221,000 times the sun's distance from the earth, or over twenty billions of miles! And this, remember, is the nearest star known to astronomers. The earth's orbit viewed from this



star would appear the same as a circle six-tenths of an inch in diameter, thus: Viewed at a distance of one mile; (this would require a telescope of fifty powers to see it as large as a pin head at

Fig. 4 a that distance; to this, any person who ever looked through a telescope will testify) and the radius of that orbit—the distance which separates the sun from our earth, ninety-one millions of miles—would be entirely hidden by a fine thread or spider's web one twenty-fifth of an inch in diameter, held 650 feet from the eye! In other words, a line 484,000,000 miles long, looked at broad-side, would shrink into a mere point, and if our sun was removed to that distance, it would shine with a light only equal to that of the north star, while its parallax would be the one hundredth of a second! Once more: "To traverse the milky way, of which our solar system forms a part, light requires 15,000 years; and to reach it from some of the distant nebulae, which appear like faint clouds, it must travel 300 times that period or nearly 5,000,000 years!" Such is the formidable, wild fancy, that the Copernican theory leads men—they know not where.

Reader, we simply call your attention to that Word which we have proved infallible, and ask you to compare the same with these statements above, and we let this matter rest for your own consideration and judgment. "God made two great

lights; the greater light to rule the day, and the lesser light to rule the night; he made the stars also. And the evening and the morning were *the fourth day*." (Gen. 1: 16, 19.) "And on the *seventh day* God *ended* his work which he had made." "Thus the heavens and the earth were finished, and all the host of them." (Gen. 2: 1, 2.) Thus we see that these things were made and were performing their functions *all* inside of *seven twenty-four-hour days*. That these days were twenty-four-hour days no one can deny without doing violence to the Scriptures.

Concerning the wisdom of man and the extent of his knowledge, and concerning the creation, the Lord asked Job some questions which Job declined, even an attempt, to answer. But there are those at the present day who will readily give an answer, though it annuls the decrees of God Himself.

We will notice a few of these questions:—"Gird now thy lions like a man, for I will demand of thee and answer thou me. Where wast thou when I laid the foundation of the earth? Declare if thou hast understanding. Who hath laid the measures thereof if thou knowest; or who hath stretched the line upon it? Whereupon are the foundations thereof fastened; or who laid the corner-stone thereof?" (Job 36: 3-6). "He hath compassed the waters with bounds, until day and night come to an end." (Job 26: 10.) Can anything pass the bounds? Listen to the Almighty when He speaks: "There is a path which no fowl knoweth, and which the vulture's eye hath not seen; the lion's whelps have not trodden it, nor the fierce lion passed by it." Job 28: 7-8.

Some ask what is the nature of these bounds that are so fixed? Ans. "The waters are hid as with a stone, and the face of the deep is frozen." (Job 38: 30.) Then may we not justly conclude from these assertions that the bounds, which the Lord

in His providence has fixed, are the *everlasting mountains* of ice? Yes, He has covered the waters, "the face of the deep," on which He founded the earth (Ps. 24: 2), with that which is as impregnable to the navigator as the rock of Gibraltar.

These facts the testimonies of surviving navigators will corroborate, and a page or two will be of interest to some.

Exploring Expedition by Capt. Wilkes.

We extract the following from the United States exploring expedition in the South Seas, by Capt. Wilkes:

"On the 16th of January, 1840, our vessels were in longitude 150° 46' E., latitude 65° 8' S. This night we were beating with frequent tacks, in order to gain as much southing as possible. Previous to it becoming broad daylight, the fog rendered everything obscure, even at a short distance from the ship. I knew that we were in close proximity to icebergs and field ice, but from the report of the lookout at sunset, I believed that there was an opening or large bay leading to the southward. The ship had rapid way on her, and was much tossed about, when in an instant all was still and quiet; the transaction was so sudden that many were awakened from sound sleep, and all well knew from the short experience we had had, that the sensation of sound and motion usual at sea, was proof that we had run within the walls of ice—an occurrence from which the feeling of great danger is inseparable. The watch was called by the officer of the deck, to be in readiness to execute such orders as might be necessary for the safety of the ship. Many of those from below were seen hurrying up the hatches, and those on deck straining their eyes to discover the barriers in time to avoid accident. The ship, still moving rapidly along, some faint hope remained that the bay might be a deep one, and enable me to satisfy my sanguine hopes and belief relative to land. The feeling was awful and the uncertainty most trying, thus to enter within the icy barrier blindfolded, as it were, by impenetrable fog, and the thought constantly occurring that both ship and crew were in

imminent danger; yet I was satisfied that nothing could be gained but by pursuing this course. On we kept, until it was reported to me by attentive listeners, that they heard the low and distant rustling of the ice. Suddenly a dozen voices proclaimed the barrier to be in sight, just ahead. The ship, which a moment before seemed as if unpeopled, from the stillness of all on board, was instantly alive with the bustle of performing the evolution necessary to bring her to the wind, which was unfavorable to return on the same tack by which we had entered. After a quarter of an hour, the ice was again made ahead, and the full danger of our situation was realized. The ship was certainly embayed; and although the extent of sea room to which we were limited was rendered *invisible* by the dark and murky weather, yet that we were closely circumscribed was evident from having made the ice so soon on *either tack*, and from the audible rustling around us. It required several hours to extricate the ship from this bay. Few are able to estimate the feelings that such an occasion causes to a commander who has the responsibility of the ship and crew, operating as a heavy weight upon his heart, and producing a feeling as if on the verge of some overwhelming calamity. All tends to satisfy him that nothing can guide him in safety through, or shield from destruction those who have been entrusted to his care, but the hand of an all-wise Providence. The last two days we had very many beautiful snow-white petrels about. The character of the ice and snow became entirely changed; the tabular formed icebergs prevailed, and there was comparatively little field ice. Some of the bergs were of magnificent dimensions, one-third of a mile in length, and from 150 to 200 feet high, with sides perfectly smoothed as though they had been chiseled. others again, exhibiting lofty arches of many colored tints, leading into deep caverns, open to the swell of the sea, which rushing in, produced loud and distant thunderings. A little further onward would be seen a vast fissure, as if some valuable force had rent in twain these mighty masses. Every noise on board, even our own voices, reverberated from

the massive and pure white walls. The tabular bergs are like masses of beautiful alabaster; a verbal description of them can do little to convey the reality to the imagination of one who has not been among them. The time and circumstances under which we were viewing them, threading our way through these vast bergs, we knew not to what end, left an impression on me of these icy and desolate regions that can never be forgotten."

We have not space in this work to give the interesting and wonderful narrow escapes of vessel and crew, as given by Captain Wilkes; we simply give this to show the dangers that exist in the regions of the *bounds*, which Providence has set. We give their circumstances of return and refer you to the work for further knowledge in this respect.

"Captain Hudson now came to the conclusion of returning north. 'After,' as he says, 'thoroughly turning over in my own mind the state of the ship, with the head of the rudder gone, hanging by two braces, and in such a state that we hardly hope to make it answer its purposes again in encountering the boisterous weather we should have to pass through before reaching the first port; the ship considerably strained, her starboard spardeck bulwarks gone as far forward as the gangway, the gripe off and the stern mutilated; fully satisfied from this state of things that she was perfectly useless for cruising among icebergs and the accompanying dangers in these latitudes. There was but one opinion as to the ship's returning north, with the exception of Mr. Emmons and Mr. Baldwin, who thought the rudder might stand, providing we did not get near the ice or fall in with icebergs; this would be to effect little or nothing and result in loss of time. I accordingly put the ship's head north, determined to proceed to Sidney to effect the necessary repairs, so as to be able at the earliest possible day to join the squadron.' Such were the dangers and difficulties, by the admirable conduct of officers and crew and consummate seamanship of her commander, that the Peacock was enabled at this time to escape."—Arctic Cruise, by Capt. Wilkes, chap. 17, pp. 134-198.

Arctic and Antarctic Icebergs.

For the purpose of noticing these formidable walls and barriers that are the terminus of navigation in any direction man can travel, we quote a short article from the *Youth's Instructor*, published at Battle Creek, Mich., Oct. 24, 1888:

"It is not generally known, even to sailors, that there is a marked difference between icebergs in the Arctic and Antarctic circles. Those of the Arctic Ocean are irregular in shape, with lofty pinnacles, cloud-capped towers and glittering dome, whereas the southern icebergs are flat-topped and solid-looking. The former reach the shore by narrow fords, but the formation of the latter is more regular. The northern are neither so large nor so numerous as those met with in the Southern Ocean. In 1855 an immense berg was sighted in 42° south latitude, which drifted about for several months and was sighted by many ships. It was 300 feet high, sixty miles long and forty miles wide, and was in shape like a horseshoe. Its two sides enclosed a bay forty miles across. A large emigrant ship ran into this bay and was lost and all on board. Only about one-ninth of an iceberg is visible above the water. There are several well-authenticated accounts of icebergs 1,000 feet high having been sighted in the Southern Ocean. This would make their total height 9,000 feet or nearly two miles." [Such were never seen north.]

Tycho (Tyge) Brahe's System of Astronomy.

Tycho, as universally called, was born in Knubstrup in Schoman, a province then subject to Denmark, in the year 1546. He assumed the principle that the earth remains fixed and immovable in the center of the universe, and that the sun and all heavenly bodies revolve round it; but succeeding astronomers have rejected Brahe's system, and adopted that of Copernicus. Says the "Encyclopædia Americana": "We are indebted to his observations for a more correct catalogue of the fixed stars, for several important discoveries respecting the

moon and the comets, and the refraction of the rays of light, and for important improvements in astronomical instruments; they served also as the basis of Kepler's astronomical labors. The most distinguished of the opponents of the great Copernicus was Tycho Brahe."

The principle authority that Tycho adduced in support of this opinion was, the literal sense of various passages of the Bible where a total absence of motion is ascribed to the earth, but although he did much injury to science by supporting this erroneous opinion we are under infinite obligations to him for the great exactness of his observations, which opened to his pupil and assistant, *Kepler of Wurtemberg*, (born 1571, died 1631) the way to more accurate discovery of the form of the celestial orbits. Kepler, moreover, demonstrated by hypothesis, that, in each elliptical revolution of the planets around the sun, an imaginary straight line drawn from the latter to the former (the *radius rector*), always describes equal areas in equal times; and lastly, that in the revolution of the planets and satellites, the squares of the times of revolution are as the cubes of the mean distances from the larger body. These three important points are comprehended under the name of *Kepler's Laws*.

Brevity demands that we abridge this narrative of these worthy sages and notice briefly that world-renowned philosopher,

Galilei Galileo.

Galileo was born at Pisa, Italy, 1564, and died January 8, 1642, aged seventy-eight years. Says the "Encyclopædia Americana": "In 1581 Galileo entered the University of Pisa to attend lectures on medicine and the Aristotelian philosophy. The spirit of observation for which he became distinguished was early developed. When only nineteen years old, the swinging of

a lamp from the ceiling of the Cathedral in Pisa led him to investigate the laws of the oscillation of the pendulum, which he was the first to apply as a measure of time. He left it incomplete, however, and it was brought to a perfection by his son, Vincenzo, and particularly by Huygens, the latter of whom is to be viewed as the true inventor of the pendulum clock. In 1586 he invented the hydrostatic balance. In 1595 he was made Professor of Mathematics in the University of Pisa. In 1597, he invented his geometrical and military compass. The mathematical truths which he discovered after 1602 are highly important; for example, that the spaces through which a body falls, in equal times, increase as the numbers 1, 3, 5, 7; that is if a body falls fifteen Paris feet, (about sixteen English), in one second, it will fall forty-five in two, seventy-five in three, and so on. Whether the thermometer was his invention it is difficult to determine; perhaps he only improved it. The telescope which he found in Holland remained not only imperfect, but useless; this he improved and turned to the heavens and in a short time made a series of most important discoveries. His most remarkable discovery was that of Jupiter's satellites, January 7, 1610. He also observed Saturn's rings, though he had not a just idea with regard to it. Galileo's name, meantime, had grown so celebrated that the Grand Duke Cassus II, in 1610 appointed him Grand Ducal Mathematician at Pisa. While thus employed he had declared himself in favor of the Copernican system in his work on the sun's spots, and was therefore denounced as a heretic. A congregation of cardinals, monks and mathematicians examined his work, condemned it as *highly dangerous* and summoned him before the tribunal of the Inquisition. The veteran philosopher was compelled to go to Rome in the winter of 1633, languished some months in the

prison of the Inquisition, and was finally compelled to renounce his former views in presence of an assembly of monks, cardinals, etc.

Abjuration of Galileo.

The abjuration and denunciation of his own hypothesis, or that which he had previously advocated, whether honestly or for self-aggrandizement, we leave for Him who knows the intents and purposes of the hearts of men, to judge; yet all who have investigated this case of Galileo may have a private opinion at least. The best authority that we can get of those who still advocate the Copernican theory, says, concerning the oft-repeated legend that on arising from his knees he said to a friend, "It does move, though," this is probably without foundation.

The abjuration of Galileo can be found on page 188 of his life, published for the School Cabinet Library by Hyde & Co., of Boston. His *sentence* is on page 184, signed by seven cardinals. We give it in toto:

"I, Galilei Galileo, son of the late Vincenzo Galileo, of Florence, aged seventy years, being brought personally to judgment, and kneeling before you, *Most Eminent and Most Reverend Lords, Cardinals, General Inquisitors* of the Universal Christian Republic against heretical depravity, having before my eyes the Holy Gospel which I touch with my own hands, swear, that I have always believed, and now believe, and with the help of God will in future believe, every article which the Holy Catholic and Apostolic Church of Rome holds, teaches and preaches. But because I had been enjoined by this Holy Office altogether to abandon the false opinion which maintains that the *sun is the center and immovable*, and forbidden to hold, defend or teach the said *false doctrine in any manner*, and after it had been signified to me that the said doctrine is repugnant to the Holy Scripture, I have written and printed a book in which it treats of the same doctrine now condemned, and adduce reasons with great force in support of the same,

without giving any solution, and therefore have been judged grievously; suspected of heresy, that is to say, that I held and believed that the sun is the center of the universe and immovable and that the earth is not the center and movable. Willing, therefore, to remove from the minds of your Eminences and every Catholic Christian, this *vehement* suspicion *rightfully* entertained toward me, with a sincere heart and *unfeigned faith*, I abjure, curse and detest the said errors and heresies and generally every other error and sect contrary to said Holy Church, and I swear, that I will never more in future say or assist anything, verbally or in writing, which may give rise to a similar suspicion of me; but if I shall know any heretic or *any one suspected* of heresy, that I will denounce him to this Holy Office or to the Inquisition and Ordinary of the place in which I may be. I swear, moreover, and promise, that I will fulfill and observe fully, all the penances which have been or shall be laid on me by this Holy Office. But if it shall happen, that I violate any of my said promises, oaths or protestations (which God avert), I subject myself to all the pains and punishments which have been decreed and promulgated by the sacred canons and other general and particular constitutions against delinquents of this description. So God help me, and His Holy Gospels which I touch with my own hands.

"I, the above named Galilei Galileo, have abjured, sworn, promised and bound myself as above, and in witness thereof with my own hand have subscribed this present writing of my abjuration, which I have recited word for word.

"At Rome, in the Convent of Minerva, June 22, 1633, I, Galilei Galileo, have abjured as above with my own hand."

We now purpose to give a brief synopsis of the life and death of the latter of the great astronomers on whom the present, modern and universal system of astronomy stands—or falls, for fall it must!

Sir Isaac Newton.

The creator of Natural Philosophy was born at Woolsthorpe, in Lincolnshire, December 25, 1642, and at his birth

was so small and weak that his life was despaired of. On the death of his father, which took place while he was yet an infant, the manor of Woolsthorpe became his heritage. His mother sent him, at an early age, to the village school, and in his twelfth year to the town of Grantham. While here he displayed a decided taste for philosophical and mechanical inventions, and, avoiding the society of other children, provided himself with a collection of saws, hammers, and other instruments with which he constructed models of many kinds of machinery. Some knowledge of drawing being necessary in these operations, he applied himself, without a master, to the study. The walls of his room were covered with all sorts of designs. After a short period, however, his mother took him home for the purpose of employing him on the farm and the affairs of the house, and sent him several times to the market at Grantham with the produce of the farm. A trusty servant was sent with him, and the young philosopher left him to manage the business, while he himself employed his time in reading. A sun dial which he constructed on the wall of the house at Woolsthorpe is still shown. The irresistible passion for study and science finally induced his mother to send him back to Grantham, where he remained till his eighteenth year, when he was entered at Trinity College, Cambridge, in 1660. Newton had the good fortune to find the celebrated Doctor Barrow, professor of mathematics. In order to prepare himself for the lectures Newton read the text-books in advance; these were Sanderson's Logic and Kepler's Treatise on Optics; the Grome of Descartes was also one of the first books that he read at Cambridge. He next proceeded, at the age of about twenty-one, to study the works of Wallis, and appears to have been practically delighted with the celebrated treatise of that author entitled, "*Arithmetica Infinitorum.*" The matter

that Newton deduced from these authors is too complicated and foreign from our points which we wish to show to here enumerate them, but will refer the reader to any good encyclopædia for details.

We shall give a few paragraphs to show the character of the man and the foundation of the system upon which modern astronomers build their theoretical castles.

“About 1665, being about to quit Cambridge on account of the plague, he retired to Woolsthorpe and now turned his attention more closely to subjects of natural philosophy. As he was one day sitting under an apple-tree the fall of an apple led him to reflect on the nature of that remarkable principle which urges all bodies toward the center of the earth. ‘Why,’ he asked himself, ‘may not this power extend to the moon? and, if so, what more would be necessary to keep her in her orbit about the earth?’ He considered that if the moon was retained about the earth by terrestrial gravity, the planets which move around the sun ought similarly to be retained in their orbits by their gravity towards that body. Setting out with the law of Kepler [see fore part of this chapter], that the squares of the times of revolution of the different planets are proportional to the cubes of their distances from the sun, Newton [supposed that he had] found by calculation that the force of solar gravity decreases proportionately to the squares of the distances; and having thus determined the law of gravity of the planets toward the sun, he endeavored to apply it to the moon—that is, to determine the velocity of her motion round the earth by means of her distance, as settled by astronomers, and of the intensity of gravity as shown by the fall of bodies to the earth’s surface. To make this calculation it is necessary to know the exact distance from the surface to the center of the earth, expressed in parts of the same measure that is used

in marking the spaces described in a given time by falling bodies at the earth's surface, for their velocity is the first term of comparison that determines the intensity at this distance from the center, which we apply afterwards at the moon's distance. It then remains only to be seen if gravity when thus diminished has precisely the degree of energy necessary to counteract the centrifugal force of the moon supposed to be caused by her observed motion in her orbit. Unfortunately at that time there existed no correct measure of the earth's dimensions. Newton was obliged to employ the imperfect measures then in use, and found that they gave for the force which retains the moon in her orbit a value greater by one-sixth than that which results from her observed circular velocity. This difference seemed, to his cautious mind, a strong proof against his bold *conjecture*. He imagined that some unknown cause modified, in the case of the moon, the general law of supposed gravity indicated by the motion of the planets. In 1666 he returned to Cambridge, was chosen Fellow of his college (Trinity) in 1667, and the next year was admitted A. M.; but he did not disclose his secrets even to his instructor, Dr. Barrow. In 1668, however, Mercator published his "Logarithmotechnia," in which he had obtained the area of the hyperbola, referred to its asymptotes by expanding its ordinate into an infinite series, which was the main secret of *Newton's method*."

"In the course of 1666, his attention had been accidentally drawn to the phenomena of the refraction of light through prisms. His experiments led him to conclude that light, as it emanates from the radiating bodies, is not a simple and homogeneous substance, but that it is composed of a number of rays endowed with equal refrangibility and possessing different coloring properties. In 1669, being appointed professor of

mathematics, preparing to lecture upon optics, he endeavored to mature his first results, and composed a complete treatise in which the fundamental properties of light were unfolded, established and arranged by means of experiments alone without any mixture of hypothesis, a novelty at that time almost as surprising as these properties themselves. Thus it appears that three great discoveries which form the glory of his life,—his method of fluxions, his theory of Universal Gravitation and the Decomposition of Light, were conceived before his twenty-fourth year. In vain did he declare that he neither advanced nor admitted any hypothesis whatever, and that his sole object was to establish and connect facts by means of the laws of nature. This severe and abstract method of reasoning was little understood, and it is hardly conceivable into what minuteness of detail he was obliged to enter. *So much was he disgusted* with these difficulties that he *gave up* the intention of printing his lectures on optics with his treatise on series. Before quitting the list, however, he addressed another paper (1675) to the Royal Society, completing the account of his results and his views on the nature of light. This treatise, united with his first paper on the analysis of light, afterwards served as the base of the great work, *Treatise on Optics*, (1704) in which, however, the experimental investigation of the phenomena is more extensive and more strictly separated from hypothesis.

“In his paper of 1675, after excusing himself for proposing a conjecture as to the nature of light, and declaiming that it had no connection with the *facts* which he had discovered, he goes on to give one which he should be inclined to consider *most probable if he were obliged to adopt any*. In his letter he proposed as matter deserving attention, to verify the motion of the earth by direct experiment, viz., by letting bodies fall from

considerable height and observing if they follow exactly a vertical direction; for if the earth turns, since the rotary velocity at the point of departure must be greater than at the foot of the vertical, they will be found to deviate from this line towards the east instead of following it exactly as they would do if the earth did not move. *This demonstration, however, failed to prove anything* in favor of the earth's motion.

“He would sometimes rise, and suddenly by some conception, would sit on his bedside for hours together, and would forget his meals, unless reminded of the necessity of taking some nourishment. It was not until 1686 that he finally concluded to present his work to the society, at the expense of which it was printed in 1687. Not more than two or three of his contemporaries were capable of understanding it, and more than fifty years elapsed before the great physical [supposed] truth which it contained was thoroughly understood by the generality of scientific men. In 1687 Newton was one of the delegates sent by the University to maintain its rights before the High Commission Court when they were attacked by James II. and in 1688, was elected by the University to the Convention Parliament, but never distinguished himself in that body.

“One morning, 1692, he had accidentally shut up his little pet dog Dimond in his room, and on returning found that the animal by upsetting a candle on his desk had destroyed the labors of several years. On perceiving his loss he only exclaimed, ‘Oh, Dimond! Dimond! you little know the mischief you have done.’ But the grief caused by this circumstance injured his health, and M. Biot shows that it impaired his understanding. This fact of a derangement of his intellect, according to Biot, explains why Newton, though only forty-five years

old when the *Principia* was published, never after gave to the world a new work in any branch of science, and merely published some which had been composed.

"In 1723 Newton made an attempt to show the fulfilment of the Prophecies of Holy Writ. In his historical account of two notable Corruptions of the Scriptures, he discusses the two passages in the Epistle of St. John and St. Paul, relating to the Trinity, which he supposes to have been altered by copyists. At this period of his life the reading of religious works, with the conversation of his friends, formed almost his only amusement, after performing the duties of his office. He had almost ceased to think of science; and during the last ten-years of his life, when consulted about any passage in his works, he would reply, 'Ask Mr. De Moivre; he knows better than I do.' When his friends expressed their admiration of his discoveries, he said, 'To myself I seem to have been as a child playing on the sea-shore, while the immense ocean of truth lay unexplored before me.' His countenance was rather *calm than expressive*; his manner languid, though his health good until his eightieth year, when he suffered from a calculous disorder, which occasioned his death, March 20, 1727." *Encyclopædia Americana*.

Says Dr. Brewster in regard to Newton's writings: "The great mass of Newton's papers came into the possession of the Portsmouth family through his niece, Lady Lymington, and have been safely preserved by that noble family. There is reason to believe that they contain nothing which could be particularly interesting to science, but as the *correspondence of Newton* with the contemporary philosophers must throw considerable light on his personal history, we trust that it will ere long be given to the public."....Brewster's Life of Newton.

"The Fall of the Apple, or the Topsy Philosopher."

The following lines were taken from an English Magazine,
Earth:

Sir Isaac sat under his apple tree,
Quaffing his good old wine,
He eyed his decanter right merrily;
And lauded the fruit of vine.

"Ho ! bring me another full bottle," he cried,
"And carry the 'empties' away;
"For wine aids reflection when fitly applied,
"And I would be pensive to-day."

He drank and he studied, he studied and drank,
Until he could study no more !
Then into a slumber he quietly sank,
And varied his thoughts with a snore:

But a breeze shook the tree under which he reclined,
And, alas ! broke the good man's repose,
For an apple dislodged by the troublesome wind—
Struck him full on the bridge of the nose.

Then up started Isaac, his face all aglow
At the insult he thought he'd received,
And quickly looked round for his impudent foe,
But in vain as may well be believed

He searched in the garden, he searched in the house,
He searched in the neighboring lanes;
Declared if he found him he'd certainly douse
The rogue in the pond for his pains.

But useless his search, he returned and sat down;
Another full bottle was brought;
But still on his face sat a terrible frown,
As the key to the mystery he sought.

The wind blew more fierce and ripe apples fell
In multitudes thickly around;
Till another one lodged on his organ of smell,
Rebounded and rolled on the ground.

"Eureka," he cried, "I've discovered the cause,
"And value the pain not a straw,
"Since 'tis so, 'twill teach me in future to pause,
"Ere hasty conclusions I draw."

He ponder'd long time, and he drank deep and oft,
 And looked most remarkably wise;
 As he peered on the ground, then gazed up aloft,
 With wisdom and wine in his eyes.

"What causes the apples to fall to the ground,
 "And why do they first strike my nose,
 "And why does the garden appear to turn round,
 "Can any the reason disclose?"

* * * * *

"Yes, the earth's going round, I am certain of that,
 "(I wish for a while 'twould be still),
 "Therefore, as it goes *round*, it cannot be *flat*;
 "Therefore must be as round as a pill.

"And what causes the apples to fall on my nose
 "And from thence to the surface of earth,
 "Where, their motion suspended, they lay in repose,
 "To what do these forces give birth?"

He thought on it deeply, he pondered it long,
 Ideas in his brain tried to enter,
 One entered at last. "Yes, I cannot be wrong,
 "Attraction draws all to the *(s)center*."

"I'll write me a book, my scheme I'll evolve,
 "A book to astonish the nation--
 "And with two learned words every question I'll solve,
 "*Attraction*, and--ah!--*Gravitation*."

Round went the orchard as Sir Isaac mused;
 Till giddy, he fell to the ground,
 And there as he lay, with his senses confused,
 Our sage even felt it go round.

His faithful man-servant at last sought him out,
 And carried him quickly to bed.
 "Yes, 'tis certainly *rolling*, of that three's no doubt;"
 Was all the philosopher said.

It is unreasonable to suppose that a man could be sane and sober to have conceived these laws of "attraction and gravitation" from the falling of an apple.

Thus we see the weak and uncertain character of the two last, so styled, great philosophers of the world on which the

Nations have erected this colossal laboratory of deception. Let us look back a few pages and draw a conclusion from the character and words of these men. Copernicus admitted his theory to be merely an assumption "not necessarily true," and he further adds: "Neither let anyone, so far as astronomy is concerned, expect anything *certain* from astronomy, since that science can afford nothing of the kind." Next Tycho "hindered" the work by contending for the *literal* and manifest passage of Inspiration. Galileo renounced all his own teachings as heretical and abominable in the light of Holy Writ.

And lastly, Newton loses his reasoning powers—in short, becomes insane, and his *contemporary* friends admit this to be true, also the great mass of his writings to be preserved more as a relic than importance to mankind. And, what is more, the Christian world has yet to ascertain which has produced the greatest amount of unbelief in God and His Word—Tom Paine, Hume and Voltaire, or the advocates of the Copernian theory of astronomy.

It seems most consistent to believe that those who profess Christianity and are supposed to be honest and educated in the things that appertain to the life hereafter have the greatest control of minds; hence, we see the necessity of each understanding the Word for himself.

CHAPTER VI.

ALL PAST TIME.

By the British Chronological and Astronomical Association,

Memorial Hall, London Street, Bethnal Green, E.

Mr. J. B. Dimbleby, Editor.

THIS association consists of a large and increasing number of chronologists and others, all of whom acknowledge one method in determining past time, viz., by the arbitrary but sure rule of astronomical cycles and measurements; in other words, by the movements of the orbs of the solar system, which originate and control time. There can be no other method for determining time correctly; hence, Chronology, which, like Astronomy, has been imperfect, is now systematized and is rendered an "exact science." It is Astronomy practically applied and enlarged — applied by making that science subservient to measurements of time instead of confining it to the less certain results of distance, and enlarged by calculating and classifying all past eclipses and transits, the former being associated, as they occur, with many great events of history, which render their periodical recurrence more impressive, interesting and useful to the intelligent mind.

The objects of the association are: To authoritatively maintain and make known the consensus of the science of time, thus definitely and correctly obtained; to remove the ignorance which exists amongst mankind through an imperfect knowledge of the elementary character of time, and to

systematize and simplify history, which, through the absence of scientific data, is misunderstood and sometimes doubted instead of being admired.

The work already achieved by scientific Chronology is a complete and absolute control of every day since history began and time was instituted on the earth, viz., from the world's epoch known as Creation, or the refabrication of the earth and the formation of moral man. The transactions of the association, which are continually issued, show how conclusively the definite character of that epoch has been obtained and how perfectly all astronomical phenomena proceed upon five lines of Lunar, Solar and Planetary time, from the first day of that period to the present time. Another great achievement of scientific Chronology is, that by the classification and enumeration of eclipses and transits they have been reduced to a system of great practical utility as metrical indicators for proving the whole or any fractional part of past time. This had long been wanted in order to settle controversy. There is yet a third achievement which is deserving of special notice, viz., the discovery of the beautiful and encouraging fact that all Biblical history is astronomical, being unalterable Lunar time, marked off in knots of seven days, and hence all the dates of Scripture fall with precision on the lines of scientific time like the cogs of a wheel. It thus becomes clear that the Book of Genesis, which gives us records of the earliest history of our race, is by its dates a marvelous compendium of the movements of planetary orbs and supplies that point of time which chronologists and astronomers had long been desirous of obtaining in order to verify all subsequent periods of history and celestial phenomena. Too much cannot be said of this splendid discovery.

Preface.

It will be evident to the readers of "All Past Time" that we are no longer dependent upon human opinion, and that the evidence we now have at our command is that of scientific testimony, research and demonstrated experience.

The additions to the present issue are:

1. Six pages showing how the calculations have been made for determining the date of the *first solar eclipse*. This section concludes with a diagram of all the past years as supplied by the eclipses. I have thought it better to do this, because it will be seen that when presented in clock-like form, it is not possible to extend or diminish the natural working of either of the three revolving cycles, any more than that of an ordinary meter or watch. I submit this diagram, which I have called "The Eclipse Chronometer," as most valuable accession to our astronomical knowledge and unquestionable proof of the length of time from its institution unto the first day of the year O to the present period. Only learned men can deny this accuracy, and I have no hesitation in saying, as a student of science, that it will beat out of the world all theories of prehistoric man. It is just as easy to disbelieve the records of a clock of wheels as to deny the cycles of eclipses. *Not a tongue can be used against them.* Reflection shows us the absolute certainty of the periods defined by eclipses, and as they corroborate the first and all succeeding epochs of history, that man were mad who contradicted them. They tell us what was the first day and year of time, and every recurring eclipse thunders, as the artillery of the heavens, the unalterable dates of Scripture history. Had any of the twelve dates of the first eight chapters of the Book of Genesis been one day different to what they are, they would have been disproved by the eclipses. To every intelligent reader, I would say that the more this is

thought of, the greater will be its splendor and importance.

2. The second important addition to the present issue comprises four pages of the intercalary periods of Scripture. As the Bible is the most ancient book in the world and its time purely astronomical, these four pages will be of great service to antiquarians, and full of interest to Biblical men.

3. Owing to many letters which teem upon me throughout the year, I have also given this year four pages of prophetic periods, treating in a scientific way of those fulfilled and those awaiting fulfilment. Upon one of these periods I desire to say a few words. We have during the past twelve months, for the first time, obtained a clear and definite understanding of the remarkable prophecy of the crucifixion as stated in Daniel 9: 25. Many able men have tried their hand at the solution of this period; but until Dr. Alder Smith, of Christ's Hospital Schools, London, took up the matter, the clear definition of the period "From the going forth of the commandment to restore and build Jerusalem unto the Messiah," was not known. We can now understand it to a day, and it is plain that every man who has any claim to intelligence, whether Jew or Mohammedan, will see that Jesus of Nazareth was the Christ.

4. Because the Book of Judges has been regarded as difficult to form into consecutive history, I have given its historical and astronomical time, to which three pages are devoted. These will be very useful in theological colleges, where "All Past Time" has many readers.

5. Sundry additions have been made this year, comprising: "The Sabbath Day not of Hebrew Origin," "The Scientific Accuracy of the Periods assigned to the Long Lives of the Patriarchs." Of the latter, I marvel to still find unlearned men giving their opinions on a subject of which they appear to know nothing. To determine whether these periods—either sepa-

rately or unitedly—are correct, we have only to see whether they carry the Solar Cycle forward, and particularly the Lunar Cycle, which supplies the order, character and succession of eclipses, and we then find the years assigned to the lives of the patriarchs are required with all the precision with which they are given. Theories fall when science advances.

In conclusion, I urge upon scientific and Biblical men the importance of using a longer period of time than one year, which is a very elementary standard of time for teaching science or history. It is better to use 651 years, a period which returns the eclipses in the same way as the vernal equinox annually returns the spring.

J. B. DIMBLEBY.

Memorial Hall, London street, England,

[The writer has been thus particular in giving the origin and brief epitome of the author of this *Chronological work*, that the readers may be able to place a proper estimate (however skeptical they may be in regard to the author's views) on demonstrated facts in regard to Bible Chronology. We glory only in the truth: "Honor to whom honor is due."

COMPILER AND AUTHOR.]

All Past Time.

ACCURACY FIRST—ARGUMENT AFTERWARDS.

[As science advances theories collapse. "Facts the Foundation—Truth the Crown."]

"It would be difficult to explain in a book," said the late Lord Chelmsford, "what a clock is and what is its practical use, unless numerous diagrams were employed. But when the knowledge is obtained, supposing it had not been received early in life, the learner would smile at the simplicity of the construction, and be thankful all the days of his life for the useful information he had obtained." This is a good illustra-

tion of the position of every person who has unfortunately no knowledge of time as pointed out day by day by the revolving orbs of Heaven, which are in the precision of their movements, the originators and umpires of the moments and numbers of years; and when, after a few simple words of explanation, the learner comprehends the grand dial formed by the mechanism of the skies; when, indeed, the thought flashes into his mind which gives him the power to discern their common movements as he does the hands of a clock, and to listen to the voice of their periodical phenomena, such as eclipses and transits, as the repeating chimes from the Belfry of Heaven, he will feel that he has acquired a vast amount of practical information, that scales of ignorance fall from his eyes, and all history, hitherto unsystematized, or perhaps regarded as doubtful, will be portrayed as pictures before his admiring mind. He will regret that so much useful information has not been taught when at college or school, and that after all he has learned, his education in common and practical things, has been without a basis and incomplete. It is to give that information that the pages of this book have been written, the object of which is to teach, even to ordinary minds, that all past time can be known by astronomical measurements or periodical cycles. When these are pointed out—which are as simple as the dial of a parish clock—the reader will find that the statement that “this is an age of scepticism,” is only such because it is an age of ignorance; that the human mind having obtained an imperfect view of the domain of one or two of the higher sciences, has unnecessarily swerved from the lines of history. This is a common mistake, but we now find by the higher achievements of modern science, that what were supposed to be history’s weakest points, have become its strongest forts. Chronology has been an imperfect science,

but it is now the most exact of all sciences, and instead of being dependent upon individual judgment, it is now systemized by measurements as unalterable and arbitrary as the multiplication table. [Or the Throne of the Universe.] The result is, the same products are obtained by all men, and history has become a science. Astronomy has also been largely benefitted by this accession. It is now as much applicable to time as to objects of distance, and by the classification of eclipses and transits, which could not have been accomplished without the correct knowledge of time supplied by Chronology, its domain has been extended 4,000 additional years, and its phenomena systemized.

By my table of eclipses published in this book and endorsed by the British Chronological Association, the correct number of any year can be proved. For instance, we learn from Josephus that just before King Herod died (which from Roman history we know was in 3998 A. M.) there was a total eclipse of the moon. If the reader turns to the "List of Astronomical Years," by which all time is measured, he will find by this same eclipse what year was our 1880, because he will observe by the team of about 70 eclipses, given in the "Bird's Eye View of Eclipses of the Christian Era," that it always occurs in Line 2, or second year of each team extending over eighteen years and eleven days. As the Astronomical Years show that the team began in 3997, the eclipse when seen by Josephus was in 3998, our Lord being then nearly two years old as St. Luke tells us. The Astronomical years further show that in 5878 the team was again new, hence the eclipse was due in the following year, 5879, our 1879. It is in our Almanac for December 17, 1880, because we are a year in advance of correct time through erroneously beginning our year 1 on 4000, instead of 4001 A. M. What an amazing lot of foolish controversy would

be avoided if men proved all years by eclipses! A glance of the eye shows that this same eclipse was in the second year of Adam, and the years obtained from Scripture history require its occurrence in year 2 A. M.

Explanation.

There are three Solar Cycles in this book. No other has existed, . They are: 1—Antediluvian, giving the years from 0 to the end of 1721 A. M., formed of seven years. 2—Ancient Hebrew, from 1722 to the end of 3999 A. M., formed of fifteen years. 3—Christian Era, from 4000 A. M., which we compute as 1 A. D., to present time, formed of twenty-eight years. There is no Solar Cycle without weeks of Seven Days, and their existence proves that *unbroken weeks have come down to us from year 0*. They are formed by the dates found in history, two or three of which are quite sufficient to construct them by a natural enumeration of the seventh days in each of the twelve months of the year. They are really clocks. A Cycle is a wheel. Hence we speak of a "bicycle," a vehicle of two wheels. Applied to time, a cycle is a complete revolution, when the point of commencement comes round again. It is formed by the precise number of years which brings the same day of the week on the same day of the month. Hence it is not possible to write eight Antediluvian years, because the eighth year would be like the first, having the same dates of the month on the same days of the week. Like the first year (See Antediluvian Solar Cycle) an eighth year would be written 7, 14, 21, 28, as the dates of the seventh, or Sabbath days. It would be the same with every month, and the whole seven years of the Solar Cycle. Hence we have the evidence of arithmetical testimony that the Antediluvian Solar Cycle was a continued repetition of seven years, as ours is of

twenty-eight years. We obtain its commencement, Saturday, on the seventh of the first month, from Gen. 2: 2, 3, as the first seventh or Sabbath day.

These seven years as written are the dates of Sabbath or seven days consecutively produced by counting seven. Thus seven must be followed by fourteen, and so on. To prove that all the dates written from the twelve months of each year, are Sabbath days, we have only to remember that there can be no more nor less than 354 days in Lunar years, which was the ancient year, because it is formed by the revolutions of the moon. As the moon revolves around the earth in twenty-nine and one-half days, the twelve months of the year must alternately possess thirty and twenty-nine days in order to keep up her movements—twelve lunations or months (Moon-eths,) in a year. This is a system now followed by the Jews, Turks and Chinese, who use the original Lunar Year, the months of which are more astronomical than our Pagan, Solar year, which, although a perfect measure of time, can begin and end anywhere, and have months of irregular length. The Lunar year, and each month of the year, must begin with a new moon. If we then notice the alternate months of a Lunar year; always thirty or twenty-nine days, we must write the dates as given in the Solar Cycle. Thus—7, 14, 21, 28, for the first month. As there are thirty days in that month we have two left; therefore, as two and five are seven, the first Sabbath or seventh day of the second month fell on the fifth. (See the Antediluvian Cycle.) Then as this second month had the dates of the Sabbath as 5, 12, 19, 26, and contained twenty-nine days, there are three days left. These three and four make the first Sabbath of the third month to fall on the fourth of that month, and so on to the end of the year and Cycle. As the Cycle ends with twenty-nine, and there are no more days in

the month, the point for beginning another Solar Cycle of seven years is reached. It will hence be plain that as the years proceed in sevens, and we have the dates of the flood on the fifth year of the Cycle, the year of the flood falls on 1656, when taken in sevens and adding five. This is the year supplied in Gen. 5, as shown at the foot of the Cycle. Of course, the first year is reckoned 0.

The next thing to be noticed is that intercalary, or extra, days were required to make lunar years, which are formed of 354 days, equal to 365, which is the length of solar years. It is clear that this was always done by the Antediluvians by using seventy-seven days at the end of the Cycle—seven times eleven are seventy-seven—this is eleven weeks. The Lunar year is eleven days short of the Solar. This plan would not disturb the Sabbath day. When it did, just a week would be taken, because we find Biblical time has all been made Solar. The Lunar year was divided by the ancients into weeks and days, but not the Solar, which was to them as a period; but if they had omitted to bring up the shorter Lunar year of 354 days by taking up eleven extra to make it up to 365, the seasons of the year would have soon been reversed. That these extra days were most carefully observed by the Antediluvians is proved by the application of the Lunar Cycle hereafter explained, and that such intercalary days were used at the end of the Solar Cycle of seven repeating years is evident from the dates of the Flood. Noah went into the ark on the first day of the Solar period, which in the fifth Lunar year—the Solar having begun eleven days later in the second, third, fourth and fifth—had got so late as to begin that fifth year on “the 17th of the second month.” It is very interesting to observe this. We get a peep into Antediluvian affairs. The time would doubtless be one of great festivity. It was also a Sabbath day,

and Noah left the ark at the end of the Solar year. By using seventy-seven days at the end of the Cycle its dates were never disturbed, and the Lunar and Solar years began on the same day with the commencement of each Solar Cycle. In this way, also, the dates of Creation were reinstated, viz., Sunday the first day and Saturday the seventh. That the dates of the Sabbath days were always the same as those on the Solar Cycle—indeed, *men cannot alter lunar years without moving the moon from her orbit*—is proved by the previous 120th year occurring on the *self-same day*, that is, of the week and date of the month as Noah's diary informs us (Gen. 7: 13). These are all matters of history. [And God said let there be lights in the firmament of the Heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years. . . . And God made two great lights; the greater light to rule the day and the lesser light to rule the night. He made the stars also. Gen. 1: 14-16.]

Like the line of history, all the lines of Astronomical Time were formed by working backwards from the present period. They could be obtained in no other way. Much could be said of their power and companionship for proving an important fact, that nothing can be added or taken away from the years of history. For instance, if an eclipse takes place on May 10th, it indicates that a certain number of years has occurred to bring it up to that date. But if it occurred on the 10th of June, we should know that forty-two years had been omitted by history, because the date would not coincide with the year. Again, we cannot run away with the eclipses without taking the transits with us. To add a month to an eclipse, we should have to push the sun forward in her orbit, in order to reach the only place opposite to the node of Venus where we can see her in transit, and Venus also would have to be driven

onward with an accelerated motion to reach her node. In fact, we cannot take an hour out of one of the Five Astronomical Lines of Time without disturbing every orb in the universe. Before these lines of time all history must bow and every man be dumb.

The First Line of Time.

HISTORICAL DATES AND PERIODS, SCRIPTURAL AND SECULAR.

The B. C. is the true one, before 3996, and the letters refer to the years of the Ancient Hebrew Solar Cycle. ☉ denotes Eclipse No. 1., Line 1., and astronomical measurement.

A. M.		B. C.
○	Creation of the World. ☉.....	3996
Antediluvian History from Gen. 5:—		
Seth was born when Adam	was 130 years old.	
Enos do Seth	" 105 "	
Cainan do Enos	" 90 "	
Mahaleel do Cainan	" 70 "	
Jared do Mahaleel	" 65 "	
Enoch do Jared	" 162 "	
Methus'lh do Enoch	" 65 "	
Lamech do Methuselah	" 187 "	
Noah do Lamech	" 182 "	
Gen. 7:11. Flood came when Noah	" 600 "	
	Add—	
1656 Flood—5th year Antediluvian	1656	
Solar Cycle.....		2340
Add from Gen. 11:—		
Arphaxad was born after the Flood	2 years.	
Salah was born when Arphaxad	was 35 years old.	
Eber do Salah	" 30 "	
Peleg do Eber	" 34 "	
Reu do Peleg	" 30 "	
Serug do Reu	" 32 "	
Nahor do Serug	" 30 "	
Terah do Nahor	" 29 "	
Gen. 12: 4 compared with 10: 32		
shows that Abraham left Ur in		
Terah's year.....	204...	
	Add —	
2082 a Table, Ancient Heb. Sol.	Total 2082	
Cycle.		

And Ex. 12:41 compared with Num. 33:3 shows it was 15th of seventh month, Tuesday. 1914

A. M.

B. C.

2513	<i>l</i>	The Exodus, Tuesday, 15th of the 7th month, at "the end of 430 years" * ☉.....	1483
2992	<i>k</i>	Foundation of Solomon's Temple laid in the 480th year afterwards, I. Kings 6: 1, on Monday, 2d of 2d sacred month Zif (8th civil month.) (See 2. Chron. 3: 3.).....	1004
3000	<i>d</i>	Dedication of Solomon's Temple, Wednesday, 7th, 1st civil (7th sacred) month.....	996
3029	<i>c</i>	End of Solomon's reign of 40 years. (Foundation of Temple was his 4th).....	977

The reader will see that by the above two tables we clearly arrive at the year 2082 A. M. He will next observe that from the middle of the year to the middle of 2513 was "the end of 430 years," or the 2513, mentioned in Exod. 12: 41, and from thence to the foundation of Solomon's Temple, "480 years," (I. Kings 6: 1) we reach 2993 for that event in Solomon's 4th year. Hence as he reigned 40 years we take the 4 off and add 36 to 2993, which makes 3029 when he died. This is the shortest and the most simple way of carrying on the chronology. The year 2082 was table *a*, the first on the Solar Cycle; Exodus year was table *l*, in both years the self-same day of the week and date was Tuesday, 15th of the 7th civil month (or legal month according to law.)

The reign of Saul, the first Hebrew King, was 40 years. David reigned the same number of years. The italic letters refer to the year or table of the Solar Cycle.

3029	<i>c</i>	Rehoboah ascended and reigned 17 years. 2 Chron. 9: 31 and 12: 13-16.....	967
3046	<i>e</i>	Abijah ascended and reigned 3 years. 2 Chron. 12: 16 and 13: 2.....	950

* Observe the words, "to the end," otherwise from the first day of the date to first day of 430 years afterwards would not reach 2513. Moses was a good chronologist. He would probably have mentioned 7th month, 2082, but it was now 1st sacred. (See Ex. 12: 2.)

- 3049 *b* Asa ascended and reigned 41 years. 2 Chron. 14:1 and 16:13. 947
- 3090 *d* Jehosaphat ascended and reigned 25 years. 2 Chron. 17:1 and 20:31. 906
- 3115 *n* Jehoram sole king. He had previously shared the throne with his father for four years. 2 Chron. 21:1 and 19:20, also 2. Kings 8:16. He thus reigned 8 years, but chronologically 4. The passage of 2 Chron. 21:19 is not a good translation. The meaning is that Jehoram died in the intercalary days at the end of two full years (solar and lunar), table *c* of the Solar Cycle. It is a common expression and a splendid way of dating accurately when the historical event allows it. 881
- 3119 *c* Ahaziah ascended and reigned 1 year. 2 Chron. 22:1-2. 877
- 3120 *d* Athaliah, a woman, usurped power (2 Chron. 22:12) for six years. "In the seventh year" (23:12) Joash was proclaimed; that was 7th of his life. See also 2 Kings 11:1. 876
- 3126 *j* Joash, ascended in his seventh year and reigned forty years, 2 Chron. 24:1. He died in the intercalary days of 3170. See margin of 24:23; the year of the Solar Cycle was table *i*. Again a splendid date. By such precise dating we cannot miss the true years. 870
- 3166 *e* Amaziah ascended and reigned twenty-nine years, 2 Chron. 24, 27 and 25:1. 830
- 3195 *d* Uzziah, or Azariah, ascended and reigned 52 years, 2 Chron. 26:1, 3. 801
- 3247 *k* Jotham ascended and reigned 16 years, 2 Chron. 27:1. 749
- 3263 *l* Ahaz ascended and reigned 16 years, 28:1. 733
- 3279 *m* Hezekiah ascended and reigned 29 years, 29:1. 717
- 3308 *l* Manasseh ascended and reigned 55 years, 33:1. 688

HEBREW HISTORY.

A. M.		B. C.
3363	<i>g</i> Amon ascended and reigned 2 years, 33:20, 21. ☉	633
3365	<i>i</i> Josiah ascended and reigned 30 years, 34:1.	631
3395	<i>i</i> Jehohaz ascended and reigned three months when he was dethroned by Necho, King of Egypt, 2 Chron. 36:1-4. (See Egyptian History.)	601
3395	<i>i</i> Jehoiakim ascended and reigned 11 years, 36:5, when he met with a miserable end by the army of Nebuchadnezzar.	601
3406	<i>e</i> Jehoiachin, a youth was placed on the throne, but was also deposed like his predecessor and carried to Babylon, From the middle of this year, 70 years of Captivity began. See Captivity and Ezekiel's years.	590
3406	<i>e</i> Zedekiah was made king by Nebuchadnezzar, and reigned 11 years. See 2 Chron., 36:11.	590

INTERESTING EVENTS.

3416 *o* Jewish monarchy ended and temple burned. The events were as follows: In the ninth year of Zedekiah, which ended on the middle of 3415, table *n*, on Sunday the tenth day of the fourth civil month, which was the tenth sacred, Nebuchadnezzar pitched against Jerusalem. See 2 Kings 25:1, Jeremiah 39:1 and Ezekiel 24:1. The siege lasted nearly to the end of the next year 3416, table *o*, for on Friday, the 9th day of the 4th (10th civil) month, there was no bread left, and all the Hebrew men of war fled in the night between the two walls via the King's garden. They ran across the plains toward Jericho, but were overtaken by the Chaldeans and the king and his sons made prisoners. The city was thus broken up, and Zedekiah being taken before Nebuchadnezzar, his sons were slain in

his presence, after which his eyes were put out. In the next month, which was 5th sacred, namely on Thursday, the 7th, the Babylonian army began to burn the city. On Sunday, the 10th, the temple built by Solomon was in flames. The king's house and all the great buildings were consumed by fire and the walls of the city were leveled to the ground. These events should be followed on the Solar Cycle. They are all astronomical time, but if the foregoing years of the patriarchs had been recorded as one less or more, these dates could not be proved by the Solar Cycle, nor by the eclipses and transits. For the sake of extreme accuracy of detail, I must state that the history viewed upon the Solar Cycle—which is the proper course—shows that the year 3415 was the latter half of Zedekiah's 9th and the first six months of his 10th. In like manner, 3416 was last half of his 10th and first six months of his 11th.

In the next year, 3417, the eclipses were ☉ No. 1 and ☉ No. 2, in the beginning of the 3d and 10th Lunar months, producing the dates of the week, as shown by the Solar Cycle and mentioned in recording the historical events. There would also be a transit of Mercury in 3406, when Zedekiah ascended.

For the continuation of the First Line of Time the reader must turn to the several books of Scripture history in the parts of this work, such as Ezekiel, Ezra, Zechariah, Haggai, Esther and Nehemiah. In these books we have a continuation of accurate history, as will be seen by the use of the letters indicating the table or year of the Solar Cycle. By noticing that the Solar Cycle consists of 15 years, it must begin when the

A. M.

years alternately end with 2 and 7, and also by affixing a letter to each year of the cycle, it is impossible to miss any day of time.

The other books of Scripture as given in this work, also corroborate this First Line of Time in the same way so that we have proof after proof of the accuracy of All Past Time.

3569 *c* The last Biblical date, and Solar Cycle, brings the First Line of Time down to a reference to the intercalary days of 3569 A. M., which was 427 B. C., and the 23rd year of Artaxerxes (see also "Persian Kings.") Therefore, from this point of time we deal with uninspired testimony, but it is voluminous, as it is supported by secular and monumental history; nevertheless, the letter or table of the Solar Cycle will always supply the correct year.

We have also the eclipses, records of which start from 3101 A. M., or 903 B. C., (old calculation) which was 101 years after Solomon dedicated the Temple, and this eclipse line is again corroborated by the transits of Venus and Mercury.

Of all secular history, we will take that of Rome as being most straight forward and well adapted for the continuation of this First Line of Time. The first year of Rome was 3246 A. M., table *j*, and Jesus Christ was born in the 750th year of Rome, 3996 A. M., and also table *j*. We, therefore, for the sake of brevity proceed as follows:

3246 <i>j</i>	1st year of Rome completed, the foundation being in 749 B. C.....	750
3441 <i>j</i>	One hundred and ninety-fifth of Rome.....	555
3636 <i>j</i>	Three hundred and ninetieth of Rome.....	360
3831 <i>j</i>	Five hundred and eighty-fifth of Rome.....	165

A. M.

B. C.

3996 *j* Seven hundred and fiftieth of Rome.3996 *j* Jesus Christ born, at the end of the 3rd civil month, our December.3997 *k*3998 *l*3999 *m*4000 *n* First year of Christian Era completed, commencing with the 4th month.4001 *o* Second year of Christian Era.4002 *a* Third year of Christian Era.

CHRISTIAN ERA.

Now that we arrive at our own years, all our difficulties commence, because our years are unscientific and do not begin with the proper month, which according to ancient history and astronomical science *should be at the end of September*, a proper period for the introduction of man when the fruits of the earth were ripe. ["And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." Gen. 1: 29.] The reader must give his careful attention in order that we may land correct time upon our Solar Cycle. It will already be seen that we are wrong in computation, thus 4002 is not our year 2, because we foolishly began with 4000 instead of 4001, that is to say, we commenced the Christian Era in the last year or the third millennium, instead of the first of the fourth. This blunder follows us through every year, so that 1878 A. D. is not 5,878 A. M., but 5,877 was the first three months of our 1878 and nine months of our 1879.

To land the Ancient Hebrew, Solar Cycle on our Solar Cycle of 28 years, the following table is constructed:

A. M.	A. D.	A. M.	A. D.	A. M.	A. D.	A. M.	A. D.	A. M.	A. D.	A. M.	A. D.
4002	3	4317	318	4632	633	4947	948	5262	1263	5577	1578
4017	18	4332	333	4647	648	4962	963	5277	1278	5592	1593
4032	33	4347	348	4662	663	4977	978	5292	1293	5607	1608
4047	48	4362	363	4677	678	4992	993	5307	1308	5622	1623
4062	63	4377	378	4692	693	5007	1008	5322	1323	5637	1638
4077	78	4392	393	4707	708	5022	1023	5337	1338	5652	1653
4092	93	4407	408	4722	723	5037	1038	5352	1353	5667	1668
4107	108	4422	423	4737	738	5052	1053	5367	1368	5682	1683
4122	123	4437	438	4752	753	5067	1068	5382	1383	5697	1698
4137	138	4452	453	4767	768	5082	1083	5397	1398	5712	1713
4152	153	4467	468	4782	783	5097	1098	5412	1413	5727	1728
4167	168	4482	483	4797	798	5112	1113	5427	1428	5742	1743
4182	183	4497	498	4812	813	5127	1128	5442	1443	5757	1758
4197	198	4512	513	4827	828	5142	1143	5457	1458	5772	1773
4212	213	4527	528	4842	843	5157	1158	5472	1473	5787	1788
4227	228	4542	543	4857	858	5172	1173	5487	1488	5802	1803
4242	243	4557	558	4872	873	5187	1188	5502	1503	5817	1818
4257	258	4572	573	4887	888	5202	1203	5517	1518	5832	1833
4272	273	4587	588	4902	903	5217	1218	5532	1533	5847	1848
4287	288	4602	603	4917	918	5232	1233	5547	1548	5862	1863
4302	303	4617	618	4932	933	5247	1248	5562	1563	5877	1878

The above A. M. years are a continuation of those annexed to the Hebrew Solar Cycle of 15 years, and began each cycle, being table *a*.

HISTORICAL AND SCIENTIFIC SUMMARY OF ALL PAST YEARS FROM CREATION.

The following is a clear summary of all years since time was instituted at Creation Period down to the end of 5876 A. M., which was September, 1878 A. D. :

	PAST YEARS.
246 Antediluvian Solar Cycles of 7 years each, from year 0 to 1721, inclusive. (See Antediluvian Solar Cycle and following page of first years of each cycle).....	1721
152 Ancient Hebrew Solar Cycles of 15 years each, from 1722 to 4001, inclusive. (See Ancient Hebrew Solar Cycle and following page of first years of each cycle.).....	2280
125 Ancient Hebrew Solar Cycles of 15 years each, brought forward from 4002 to 5876, inclusive. (First Line, of Time, showing Ancient Hebrew Solar Cycle sychronized.).....	1875
Total, end of.....	5876

The foregoing summary is the production of historical records and dates. A Solar Cycle cannot be broken by jumping off one to another before one is complete, nor can a year be broken. It must, both for the sake of seasons and dates, be completed before another is begun.

The following are the chief reasons why we cannot use the Solar Cycle of twenty-eight years belonging to the Christian Era: In the first place there is no succession, as our year begins with January, the fourth month of the true year [September]. To illustrate this great disadvantage, let it be supposed that a man is measuring a piece of timber, and after marking off several feet he stops and begins somewhere further on. This breach would preclude him from giving the true length of the timber. In the second place, we jumped eleven days in the year 1752, which was making another hole in our cycles of time. And in the third place, we thrice omit a day in every 400 years. With chasms like these, increasing as time goes on, our Solar Cycle is a worthless thing for measurement.

Respecting the astronomical or scientific character of these 5876 years, the reader must refer to eclipses, the Lunar Cycle, the transits of Mercury and the transits of Venus, which produce precisely the same number of years either taken in parts, that is, from period to period, or as a whole.

It is this extreme accuracy and minuteness of detail, obtained by Solar Cycles, that excludes the requirement of *such a crutch as the Julian period*. A good chronologist never requires such a support.

It is a great fact, and ought therefore to be stated, that no dates are scientific, but those found in the Scriptures. They are all a simple succession in the chain of time from the first day, and no man can alter that succession. Every date in the Bible falls upon the proper year of the Solar Cycle, and the

correctness of the year is shown by the fact, that every Antediluvian Solar Cycle must have for its last figures 0, 7, 4, 1, 8, 5, 2, 9, 6, or 3, and every ancient Hebrew Cycle 2 or 7. By observing this, we could see in a moment if any year was erroneously on the Cycle or wrongly dated.

IMPORTANT SUGGESTIONS TO ALL NATIONS.

The perfect succession of years from the point of time when history began shows the preference which must be given to the use of the A. M. years as a true succession of time. For this reason I hope that if the world reaches the conclusion of the present century, men will consider themselves sufficiently advanced in intelligence as to abolish the A. D. year, which is irregular, owing to proceeding from 3996, 4004, and 4000 and that for the purposes of systematizing both history and astronomical science, we shall amend our present humiliating errors.

The subject commends itself to all nations. The present unscientific system is increasing our difficulties as time rolls on, and therefore it is easy to see that there is a time coming when the present mode of observing the years will be altered. I would suggest that when the nineteenth century is completed mankind should take up the correct system and true succession of years by starting what would be Wednesday, Jan. 1st, 1901 A. D., as still 1900 until we reach October, which historically and scientifically is the first month of the true year, Sept. Then on Wednesday, October 1st, start with the year as 5900 A. M., and ever afterwards begin the year with that month. If this be done, all eclipses and transits will "strike the years for us like the bell of a parish church clock, and we shall be restored to harmony with the movements of the orbs around us, for which purpose we are told that their motions are designed.

DATES OF THE SABBATH DAYS DURING THE DELUGE, 1656

A. M., OR 2340 B. C.

By J. B. Dimbleby, Lecturer on Bible Chronology, and the discoverer of the form and length of the ancient year; also discover of the Antediluvian and Ancient Hebrew Solar Cycles, and first enumerator of all the eclipses before Christ;

The Lunar year 1656 (the Flood year) began with the third day of the week, Tuesday; hence, the fifth of the month would be the first Sabbath day (Saturday) of that year. To prove this, see first month of "Antediluvian Almanack for 1656" and compare it with the fifth year of the "Solar Cycle of the Antediluvians," which was the Flood year. The dates of this fifth year are the natural succession of seventh days from the first year of the Cycle, in writing out which we unconsciously enumerate nine dates of the Flood derived from the seventh day in the first year, by regularly assigning thirty and twenty-nine days alternately to the months. As the dates all come round again on the same day of the week after seven years, 1656 must be the fifth year of the Cycle, and the fifth day of the month the Sabbath day in a direct line from the first Sabbath in Eden shown in Creation year.

<i>The Solar Period of 365 days from b to i, see Gen. 7: 11, and 8: 14, the time Noah was in the Ark.</i>	1st month	.. ..	5	12	19	26	
	2nd "	.. ..	3	10 ^a	17 ^b	24	
	3rd "	.. ..	2	9	16	23	30
	4th "	.. ..	7	14	21	28	
	5th "	.. ..	6	13	20	27	
	6th "	.. ..	4	11	18	25	
	7th "	.. ..	3	10	17 ^c	24	
	8th "	.. ..	1	8	15	22	29 ^d
	9th "	.. ..	7	14	21	28	
	10th "	.. ..	5	12	19	26	
	11th "	.. ..	4	11 ^e	18 ^f	25 ^g	
	12th "	.. ..	2	9	16	23	
The year ended on the 6th day of the week,							
Part of Year 1657, Noah's 601st.							
	1st month	.. ..	1 ^h	8	15	22	29
	2nd "	.. ..	6	13	20	27 ⁱ	

The reader will find this table more plain a few pages further on.

REFERENCES:—*a* Genesis 7: 1 with 4; *b* 7: 11; *c* 8: 4; *d* 8: 3 (the 150 days after 40 of rain ending on the 190th day of the Flood, must fall on the Sabbath day, the 29th of the 8th month); *e* 8: 6 (the second 40 days began 8: 5, viz., 221st to 260th day of the Flood, immediately on their expiration the dove was sent out the first day, which unquestionably rose from the Ark on the Sabbath day); *f* 8: 10, the dove sent out the second time; *g* 8: 12, dove sent out the third time; *h* 8: 13, New Year's day (Lunar) and Sabbath day; *i* 8: 14, earth all dried, end of Solar period of 365 days, and Noah leaves the Ark.

The above nine Sabbath days come down in unbroken weeks from the creation of man and the first Sabbath in Eden, the first day of that week being a triple alliance—the Lunar year of 354 days, the Solar period of 365 days, and astronomical Lunar Cycle all starting together 1656 Solar years before the Flood—a splendid and marvelous event and a great scientific fact, verified by all eclipses.

EXAMPLE of the commencement of the Solar year during seven years, after which the years again repeated their dates:

1.....	In 1652	the Solar period began on 1st day of 1st month.*		
2.....	In 1653	do.	12th	do. do.
3.....	In 1654	do.	24th	do. do.
4.....	In 1655	do.	6th day of 2nd	do.
5.....	In 1656 (Flood)	do.	17th	do. Gen. 7: 10-13.
6.....	In 1657	do.	28th	do. do.
7.....	In 1658	do.	10th day of 3rd	do.

[*1st month, 15th of September.]

The intercalary days required to make the Solar period again begin with the Lunar year would be seventy-seven, or eleven weeks introduced at the end of each seventh Lunar year, and without interfering with the regular succession of the Sabbath day. (See Antediluvian Solar Cycle.)

A perfect calendar of the full year (like the form of those

given of our own years in pocket books and sheet almanacs) of any year since Creation, upon which it will be seen that the dates of the Bible fall in their proper places in a line from Eden, and in strict conformity with astronomical data, down to Acts 20: 6, 7, or from thence to the present year, can be had.

The Lunar year is more scientific than the Solar year. It is strictly governed by the motions of the moon, which by revolving round the earth in $29\frac{1}{2}$ days, requires that the months should alternately possess 30 and 29 days to keep up with her 12 monthly revolutions. Counted in this way, it will be seen that the dates above given are 7th days. Thus: 5 and 7 are 12, as shown in the 1st month. As there are 4 left after the 7th day, 26th, 3 more days in the second month must be the next 7th or Sabbath day. At the end of the second month (which has 29 days) there are 5 days left, and therefore, 2 more days in the 3rd month must be Sabbath days again.

[SEE TABLE ON FOLLOWING PAGES.]

THE FLOOD PERIOD—ONE YEAR AND TWO MONTHS—1656-7, A. M.

DAY. DATE.	MONTH 1.	FLOOD DAY.	DAY. DATE.	MONTH 2.	FLOOD DAY.	DAY. DATE.	MONTH 3.	FLOOD DAY.
3	1 [Oct. 15th] New (lunar)		5	1		6	1	
4	2 Year's Day. The Solar		6	2		7 Sat. 2	2	14
5	3 year was a period not		7 Sat. 3	3		1	3	15
6	4 divided into days, and		1	4		2	4	16
7 Sat. 5	5 would begin this year		2	5		3	5	17
1	6 [a fifth one on the Solar		3	6		4	6	18
2	7 Cycle, as is evident by		4	7		5	7	19
3	8 its dates,] on the 17th		5	8		6	8	20
4	9 of second month—Oc-		6	9		7 Sat. 9	9	21
5	10 tober.		7 Sat. 10	10	Prepare to enter the Ark	1	10	22
6	11		1	11	(Gen. 7: 1) and end of	2	11	23
7 Sat. 12			2	12	40 days' grace from 1st	3	12	24
1			3	13	day of the Lunar year—	4	13	25
2			4	14	a sign to Nineveh.	5	14	26
3			5	15		6	15	27
4			6	16		7 Sat. 16	16	28
5			7 Sat. 17	17	Storm and rain begin	1	17	29
6			1	18	(Gen. 7: 10-13) Noah	2	18	30
7 Sat. 19			2	19	"shut in." It was the	3	19	31
1			3	20	beginning of the new	4	20	32
2			4	21	Solar year, and in the	5	21	33
3			5	22	midst of all its festi-	6	22	34
4			6	23	ties. They were all	7 Sat. 23	23	35
5			7 Sat. 24	24	"eating and drinking."	1	24	36
6			1	25	(Mat. 24: 38.)	2	25	37
7 Sat. 26			2	26	[It seems that here Noah	3	26	38
1			3	27	enters upon his typical	4	27	39
2			4	28	rest; all the earth now	5	28	40
3			5	29	hushed in silence.]	6	29	41
4					[4 Sabbaths in 2d month.]	7 Sat. 30	30	42
								43
								[5 Sabbaths in 3d month.]

THE FLOOD PERIOD—ONE YEAR AND TWO MONTHS—1656-7, A. M.

MONTH 4.		MONTH 5.		MONTH 6.	
DAY.	DATE.	DAY.	DATE.	DAY.	DATE.
1	1	2	1	4	1
2	2	3	2	5	2
3	3	4	3	6	3
4	4	5	4	7 Sat.	4
5	5	6	5	1	5
6	6	7 Sat.	6	2	6
7 Sat.	7	1	7	3	7
1	8	2	8	4	8
2	9	3	9	5	9
3	10	4	10	6	10
4	11	5	11	7 Sat.	11
5	12	6	12	1	12
6	13	7 Sat.	13	2	13
7 Sat.	14	1	14	3	14
1	15	2	15	4	15
2	16	3	16	5	16
3	17	4	17	6	17
4	18	5	18	7 Sat.	18
5	19	6	19	1	19
6	20	7 Sat.	20	2	20
7 Sat.	21	1	21	3	21
1	22	2	22	4	22
2	23	3	23	5	23
3	24	4	24	6	24
4	25	5	25	7 Sat.	25
5	26	6	26	1	26
6	27	7 Sat.	27	2	27
7 Sat.	28	1	28	3	28
1	29	2	29	4	29
[4 Sabbaths in 4th month.]		[4 Sabbaths in 5th month.]		[4 Sabbaths in 6th month.]	
44		73		103	
45		74		104	
46		75		105	
47		76		106	
48		77		107	
49		78		108	
50		79		109	
51		80		110	
52		81		111	
53		82		112	
54		83		113	
55		84		114	
56		85		115	
57		86		116	
58		87		117	
59		88		118	
60		89		119	
61		90		120	
62		91		121	
63		92		122	
64		93		123	
65		94		124	
66		95		125	
67		96		126	
68		97		127	
69		98		128	
70		99		129	
71		100		130	
72		101		131	
		102			

THE FLOOD PERIOD—ONE YEAR AND TWO MONTHS—1656-7, A. M.

MONTH 7.		MONTH 8.		MONTH 9.	
DAY. DATE.	FLOOD DAY.	DAY. DATE.	FLOOD DAY.	DAY. DATE.	FLOOD DAY.
<i>April.</i>		<i>May.</i>		<i>June.</i>	
5 1	132	7 Sat. 1	162	1 1	191
6 2	133	1 2	163	2 2	192
7 Sat. 3	134	2 3	164	3 3	193
1 4	135	3 4	165	4 4	194
2 5	136	4 5	166	5 5	195
3 6	137	5 6	167	6 6	196
4 7	138	6 7	168	7 Sat. 7	197
5 8	139	7 Sat. 8	169	1 8	198
6 9	140	1 9	170	2 9	199
7 Sat. 10	141	2 10	171	3 10	200
1 11	142	3 11	172	4 11	201
2 12	143	4 12	173	5 12	202
3 13	144	5 13	174	6 13	203
4 14	145	6 14	175	7 Sat. 14	204
5 15	146	7 Sat. 15	176	1 15	205
6 16	147	1 16	177	2 16	206
7 Sat. 17	148	2 17	178	3 17	207
1 18	Ark rested this Sabbath. 148	3 18	179	4 18	208
2 19	"And the Ark rested in 149	4 19	180	5 19	209
3 20	the seventh month, on 150	5 20	181	6 20	210
4 21	the 17th day of the 151	6 21	182	7 Sat. 21	211
5 22	month, upon the 152	7 Sat. 22	183	1 22	212
6 23	mountains of Ararat." 153	1 23	184	2 23	213
7 Sat. 24	(Gen. 8:4.) 154	2 24	185	3 24	214
1 25	Another nail in a sure 155	3 25	186	4 25	215
2 26	place: we are right in 156	4 26	187	5 26	216
3 27	our computation.] 157	5 27	188	6 27	217
4 28	158	6 28	189	7 Sat. 28	218
5 29	159	7 Sat. 29	End of 150 days of preva- 190	1 29	219
6 30	[4 Sabbaths in 7th month.] 161	lence of waters. (Gen. 7:24.)	[5 Sabbaths in 8th month.]	2 30	[4 Sabbaths in 9th month.] 220

DAY.	DATE.	MONTH 1.	FLOOD DAY.	DAY.	DATE.	MONTH 2.	FLOOD DAY
7 Sat.	1	(October.)	Covering of	2	1	November.	339
1	2		the ark removed. New	3	2		340
2	3		Year's day, and the	4	3		341
3	4		601st of Noah. (Gen.	5	4		342
4	5		8:13.) Face of the	6	5		343
5	6		ground was dry.	7 Sat.	6		344
6	7			1	7		345
7 Sat.	8			2	8		346
1	9			3	9		347
2	10			4	10		348
3	11			5	11		349
4	12			6	12		350
5	13			7 Sat.	13		351
6	14			1	14		352
7 Sat.	15			2	15		353
1	16			3	16		354
2	17			4	17		355
3	18			5	18		356
4	19			6	19		357
5	20			7 Sat.	20		358
6	21			1	21		359
7 Sat.	22			2	22		360
1	23			3	23		361
2	24			4	24		362
3	25			5	25		363
4	26			6	26		364
5	27			7 Sat.	27	Noah came out of the	365
6	28			1	28	ark. All earth dried.	
7 Sat.	29			2	29	Gen. 8: 14.	
1	30	[5 Sabbaths in 1st month.]	338			[4 Sabbaths in 2d month.]	

PERIOD OF THE FLOOD CONCLUDED.

It will be seen by the figures on the right that Noah was in the Ark the full Solar period of 365 days, and the incidents of the Flood occurred on nine Sabbath days, the Lunar month having, as now, alternately thirty and twenty-nine days.

It is interesting also to observe that as the dates of the Flood are true Solar time proved by the Lunar Cycle, as those of 1656, the years given us in (Gen. 5:) as the births of the patriarchs, coupled with the 600 years of Noah, amounting also to 656 years, are a marvel record of historical accuracy, and not the "poetry" or the legendary "tales" which some rash and unscientific writers have called them.

As a chronologist, I feel a difficulty in finding words to express my admiration of the original or Antediluvian form of years. A Lunar cannot be played with as we play with our Solar year. It was formed by the phases of the moon, which, like a great clock in the firmament registered, when new, the beginning, and when full, middle of month, and was beyond the reach of human power to alter a moment of time. It was a Divine appointment when time was instituted in Eden, in breaking away from which we have involved ourselves in a host of complications which must ever increase as time goes on. The original, or Antediluvian Solar Cycle of seven simple astronomical years, is another feature of the Lunar year which has the stamp of Divinity. Like the number of the days of the Lunar year, the Solar Cycle contained 354 Sabbath days, and when the intercalary days were added, the Sabbath days were 365, like the number of days in the Solar year. The years of Enoch, 365, seem to proclaim the same grand astronomical facts of which Noah's detention in the Ark was another symbol. As an unalterable period of time, the Lunar year continued in use from Creation to the destruction of Jerusalem, and, indeed, is now observed by the Jews, though they are plainly wrong in the way in which they have twice sought to recover the true computation of years. In fact, as scientific men, we cannot get away from the truths of the first Chapter of Gen. It bears the stamp and superscription of Deity, and as the beginning of time it is a chain which no man can sever without driving the spheres of Heaven out of their courses. As a chronologist and an astronomer, I am obliged to continue the use of the Lunar year. It is simple and makes half its own calculation. All the Sabbath days of this work are the seventh days of the astronomical line from Creation.

The Antediluvian Solar Cycle (showing the dates of all Sabbath days.) The first or Creation year on this Solar scale

ANTEDILUVIAN SOLAR CYCLE, SHOWING DATES OF ALL THE SABBATH DAYS.

	Creation.	2d Year.	3d Year.	4th Year.	5th Year.	6th Year.	7th Year.
1st month	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29	4 11 18 25
2d "	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23
3d "	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29
4th "	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
5th "	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26
6th "	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
7th "	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30
8th "	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28
9th "	2 9 16 23 30	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
10th "	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25
11th "	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
12th "	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29

is year 0, and the second year like the second hour of a clock, is one. We count our age this way as past time, but only the first seven years of this cycle count as six.

The seventh or Sabbath days of the intercalary period would be: 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77.

The cycle is proved by the "self-same day" of the week falling 120 years back on the same day the Flood began. See Gen. 7: 13, and compare with Self-Same Day in Ex. 12: 41.

Patriarchs seem to have been the keepers of the calendar, dating their year from New Year's day. See Gen. 8: 13.

The unalterable construction of this Solar Cycle is seen as follows: It is seven Lunar years of 354 days each, or twelve revolutions of the moon. As the moon completes a revolution round the earth in $29\frac{1}{2}$ days, the Ancients alternately used 30 and 29 days for their month in order to keep up with

her movements, and thereby begin each year as well as every month with a new moon. If we therefore commence to put on a piece of paper each seventh day, we shall write all the figures here printed. Thus the fourth seventh, or Sabbath day in the first month, is twenty-eighth. As we have two days to spare, they make the first Sabbath of the second month to fall on the fifth of the month. When we have in this way written seven years we shall find that we can write no more, because the dates come round again. An eighth year would be like the first. This is the meaning of a Solar Cycle. We shall also find that we have unconsciously written nine of the Scriptural days of the Flood, viz., in the fifth year and the first two months of the sixth year. The Flood, we are told in Gen. 5, was 1656 A. M. Let us see if these dates were: If we look at a following page, giving the first year of each Cycle, or seven years, we see that 1652 was the first year; therefore 1653 would be a second, 1654 a third, 1655 a fourth, and 1656 a fifth year. The dates then of the fifth year proved the Flood to have occurred in 1656. Now see Gen. 5:

Seth was born when Adam.....	was	130	years old.
Enos do Seth.....	"	105	"
Cainan do Enos.....	"	90	"
Mahaleel do Canian.....	"	70	"
Jerod do Mahaleel.....	"	65	"
Enoch do Jerod.....	"	162	"
Methuselah do Enoch.....	"	65	"
Lamech do Methuselah.....	"	187	"
Noah do Lamech.....	"	182	"
Gen. 7:10-13-Flood came when Noah ..	"	600	"

1656 or 2340 B. C.

We here find that Scripture history and true science agree. But the most grand proof is, all the eclipses we now see necessitate the occurrence of the *Total Eclipse* No. 43, line 12, in

1656 A. M., which again requires No. 1 at Creation. (See Antediluvian Eclipses and list of Astronomical Years.) We can next apply a stern test to prove these years were made up to Solar periods. As the year is eleven days short of the Solar, the seasons would in twenty years be reversed and the dates of the seventh days of the first year get into the second. To prevent this great dilemma, the nations using the Lunar year employed extra days, called "intercalary." Seven times 11 are 77. The Antediluvians could use no less, and further, their dates show that they used them at the end of each seventh year, and thus began anew, their Solar Cycle as at Creation. This would not disturb the regular observance of the seventh, or Sacred Sabbath day, because seventy-seven days are just eleven weeks. Now that they did this is evident from the fact that the 133d Lunar year is the Solar year also.

The moon is also new on the same day after nineteen Solar years. This is known in astronomy as the Metonic or Lunar Cycle, and to apply it we must square seven with nine.

It is certain then that by putting in the extra (intercalary) days at the end of the cycle, the Lunar and Solar years began together; not exactly so, as at the end of two cycles they have put in an extra week, because fifteen years require 171 intercalary days. This is a beautiful scientific test of the precise Solar length of the Antediluvian years, an unquestionable *demonstration* of the true historical character of the book of Genesis, and the Divine origin of time.

[*Illustration.*—A mechanic makes two cog-wheels, and makes the cogs and spaces between the cogs equal, so as to have the one wheel match into the other; he makes one wheel to contain a given number of cogs, say, No. 1, 60; he makes the other No. 2, enough smaller so as to admit of just 59 cogs

and proportionate spaces. He now puts the wheels, or cycles, if you please, together, and chalks a cog and a space that are in mesh and in line with the center of the two wheels. He next commences to give wheel No. 2 revolutions; he turns it once round and finds that it lacks just one cog of matching into the chalked space previously made; but if he continues to revolve the wheel until he has made as many revolutions as there are cogs in the wheel No. 1, he will find his chalk marks match again. So it is with these cycles.]

HOW ANY MAN CAN PROVE THE DATE OF CREATION AND THE FLOOD.

The annexed page (the Antediluvian Solar Cycle) has brought me hundreds of letters of congratulation. It gives, even to a child, the means of proving the historical record of the creation of the present order of things of the world and the year of the Flood. The simple way of doing this is as follows:

First reckon up the years of the world when each of the patriarchs was born, as given us in Gen. 5. The line is consecutive from father to son, and the years are tabulated under the Solar Cycle, where they produce a total of 1656 as the Flood Year.

Look next at the Antediluvian Solar Cycle. It contains seven years and cannot be longer or shorter, because seven years bring round the day of the week upon the same date of the month. This is the meaning of a Solar Cycle or cycle of days produced by the sun. The figures are the dates of the seventh or Sabbath days of each month, and they could never alter. Thus the first month of the first year of each cycle had always its Sabbath days on the 7th, 14th, 21st and 28th of the month. Indeed, every figure of the Solar Cycle is the consecutive date of the seventh day. The years are Lunar and therefore the months have alternately 30 and 29 days. This arrange-

ment is now observed by the Jews, Turks and Chinese, and has the moon new on the first day of each month, because the moon makes its revolution round the earth in $29\frac{1}{2}$ days, so that by borrowing the half-day from every other month the moon was like a great clock in the sky—new at the beginning and full in the middle of the month. A boy when blindfolded and bearing in mind that Lunar months have alternately 30 and 29 days, could repeat all the figures of the Solar Cycle, and he would unconsciously mention nine of the ten dates of the Flood in the fifth year of the cycle and the two first months of the sixth year. This proves that the fifth year was the Flood year.

We have next to see whether this fifth year of the cycle ever became 1656. It did, and the proof is as follows: As the cycle is seven years, 236 cycles are 1652. Therefore, the first year of the cycle would be 1652, and the second 1653, the third 1654, the fourth 1655, and the fifth (the year we are looking for) would be 1656. In this fifth year we have the Flood dates, as shown in a previous page giving the dates of the Deluge.

N. B.—The reason why 1652 was a first year of the cycle and not the last is, Creation year is 0, as is the first of a life.

As we can now precisely determine the accuracy of the year of the Flood, we can with the same astronomical precision find the date or first day of Creation. It is manifest that this was Sunday, the first day of the week, as observed at the present time, the first day of the month, and the first year of the Solar Cycle, or, in other words, 1656 years before the Flood. We cannot have one date without the other. It is the Solar Cycle which gives us the power to determine both, and let it be remembered that the Lunar Cycle is a high scientific way for showing that the Solar Cycle has been carried on correctly.

It is still more satisfactory to know that every day of the

Solar Cycle is required by the Eclipse Cycle, the working of which in its "tell-tale," or progressive character, shows the necessary consecutive years, and like the two transit lines of time, supplies the day of the week which each year has begun. These are all explained.

From the epoch of Creation, to the end of September, 1883, A. D., was 5882 years. As this is a period determined by Five Lines of Astronomical Time, we cannot alter it, without altering the motions and orbits of the planets. *They are a clock whose wheels we cannot reach.* How precise and continuous are its movements.

We must admit that one of the impressive and brilliant features of Creation is the high scientific character of its date. We cannot suppose that the date was given by the writer merely to show that there was such a date. What did the Antediluvians, or Moses who quotes from their records, know about the transits of Mercury? We must accept the date as a reference to an event, in the same way as the birth of a child. The events are stated to be a reconstruction of the face of the world (this is the least construction we can accept) and the introduction of intelligent and moral man, because the same writers who give us the date inform us that before Adam "THERE WAS NOT A MAN TO TILL THE GROUND." Some men say that Adam was the head of a new race. But if the writers of Scripture are so marvelously correct with the dates, ought we not give them credence for the facts which they supply? Besides this, it is evident that the date has been carried on consecutively, and if the events were not correct, it would not be possible to record anything which the early generations of men would know was not true.

Men should be aware of teaching what is speculative, be-

cause experience shows that as true science advances it has often destroyed theory and brought its advocates to shame.

TABLE OF EACH FIRST YEAR OF THE ANTEDILUVIAN SOLAR CYCLE.

The following are 7th years and therefore the first of each successive Cycle of Seven:

*0	259	518	777	1036	1295	1554	1813
7	*266	525	784	1043	1302	1561	1820
14	273	*532	791	1050	1309	1568	1827
21	280	539	*798	1057	1316	1575	1834
28	287	546	805	*1064	1323	1582	1841
35	294	553	812	1071	*1330	1589	1848
42	301	560	819	1078	1337	*1596	1855
49	308	567	826	1085	1344	1603	*1862
56	315	574	833	1092	1351	1610	1869
63	322	581	840	1099	1358	1617	1876
70	329	588	847	1106	1365	1624	1883
77	336	595	854	1113	1372	1631	1890
84	343	602	861	1120	1379	1638	1897
91	350	609	868	1127	1386	1645	1904
98	357	616	875	1134	1393	1652	1911
105	364	623	882	1141	1400	1659	1918
112	371	630	889	1148	1407	1666	1925
119	378	637	896	1155	1414	1673	1932
126	385	644	903	1162	1421	1680	1939
*133	392	651	910	1169	1428	1687	1946
140	*399	658	917	1176	1435	1694	1953
147	406	*665	924	1183	1442	1701	1960
154	413	672	*931	1190	1449	1708	1967
161	420	679	938	*1197	1456	1715	1974
168	427	686	945	1204	*1463	1722	1981
175	434	693	952	1211	1470	*1729	1988
182	441	700	959	1218	1477	1736	*1995
189	448	707	966	1225	1484	1743	2002
196	455	714	973	1232	1491	1750	2009
203	462	721	980	1239	1498	1757	2016
210	469	728	987	1246	1505	1764	2023
217	476	735	994	1253	1512	1771	2030
224	483	742	1001	1260	1519	1778	2037
231	490	749	1008	1267	1526	1785	2044
238	497	756	1015	1274	1533	1792	2051
245	504	763	1022	1281	1540	1799	2058
252	511	770	1029	1288	1547	1806	2065

Each of the years enumerated above began on the first day of the week, *our* Sunday, having *their* first Sabbath on the 7th day, Saturday. They are, therefore, all table 1 of the seven

repeating years or Solar Cycle, showing the dates of the Antediluvian Sabbaths. Those marked thus * also commenced a sevenfold Lunar Cycle—a beautiful scientific proof that the years were made Solar. The Lunar Cycle being a measure of the 19 years, to work it upon a scale of 7 years, it must be used sevenfold—7 times 19 are 133—hence, the expiration of each 133 years, reproducing the dates of Creation week and year, is an unquestionable demonstration that the shorter Lunar years were lengthened to the Solar years by adding extra or intercalary days.

To find 1656, the Flood year, it will seem that 1652 was a first year or on the Solar Cycle, therefore, Table 2 is 1653, Table 3 is 1654, Table 4 is 1655, and Table 5 is 1656.

It will be seen by the annexed table of Sabbaths of every seven years, which form the Solar Cycle or repeating years of the Antediluvians, that they are backed up to the times of Creation, namely, 1656 years before the Flood; that the first Sabbath was the seventh day of the first month of the first year. Hence it is plain that time was instituted in Eden, and that the date of Creation is a historical and scientific fact.

It will be seen by the Solar Cycle on the previous pages that the dates of the Deluge always come round again on the same days of the week when the year was the fifth of the Cycle, or sevenfold series. Taking 1652, which the annexed table of first years supplies, the fifth of the Cycle is 1656, having the same dates for Sabbaths as those printed in black type, with Scriptural references in the explanation of the nine Sabbaths in Noah's diary of the Deluge. How beautiful is this. It proves that the dates of Creation and the Deluge are historical facts, and the *Bible* the *Log Book* of the *World*.

These seven years are not originally written in the simple order as printed. They were worked backwards from the

Flood. Having first found the true form of the Deluge here, the next step was to obtain the Solar Cycle by ascertaining how many years elapsed before the dates repeated themselves on the same Sabbath days. When this was done the years were backed in sevens, and it was found that they exactly took in 1656 years obtained in Gen. 5, and began the first Sabbath in Eden on the 7th day of the first week and first month.

The Lunar Cycle being 19 Solar years (a period of 235 lunations when the moon is again new at the same time and place), we have a beautiful scientific proof that the Antediluvians carefully added the extra intercalary days, otherwise it could not fall on the first year. These are great scientific facts. What Creation was, this work does not undertake to say, but it was the Divine institution of time and the origin of man—Adam's years are the progress of time.

NOTE—The Lunar Cycle being 2 hours and 4 minutes longer than 19 Solar years does not interfere with the computation of years.

The Lunar Cycle.

THE SECOND LINE OF ASTRONOMICAL TIME. HISTORY SYSTEMIZED.

A Lunar Cycle—sometimes called Metonic Cycle in honor of Meton, its discoverer—is a period of 19 tropical years, or 19 years, two hours, four minutes, when the same new moon occurs. Thus, if a man saw the moon new, apparently resting on the top of a distant church spire, and the clock struck nine in the evening, he might see the moon new again 19 years afterwards at four minutes past eleven and in the same position. The period is a measure of time, 325 lunations which will gage All Past Time by measuring it off as a man might measure off a ferkin of wine with a standard pint jug.

Apply this to the Antediluvian Solar Cycle and it will show

that every 133d year was the same as the first year, that is beginning with Sunday and having Saturday on the 7th day of the month.

The process is fully explained in the page Table of First Years of each Antediluvian Solar Cycle, showing that to square 7 with 19 we must take the Solar Cycle sevenfold. Thus 7 times 19 are 133. Every 133d year is in that year marked *, and it falls on a first year. If it fell on any other year it would show that the patriarchs had not kept correct time, or had not properly observed the intercalary days.

METHOD FOR PROVING THE YEAR.

The following is an astronomical method for proving the year of the FLOOD:

7 cycles of 19 years are 133 A. M.			
14	do	do	266 "
21	do	do	399 "
28	do	do	532 "
35	do	do	665 "
42	do	do	798 "
49	do	do	931 "
56	do	do	1064 "
63	do	do	1197 "
70	do	do	1330 "
77	do	do	1463 "
84	do	do	1596 "—————1596
			1 cycle of 19 years 19
			1 do do 19
			1 do do 19

Table 2 of Solar Cycle was year.....1653

Hence, table 3 was 1654, table 4 was 1655 and table 5 was 1656, upon which we find the dates of the Flood, in Gen. 7 and 8; and from Chap. 5, we find the Flood year was 1656.

The above is historical time, or years A. M. They would be one less if we start year 0 as 1.

This Lunar Cycle proves all periods of history. It settles the doubts of men respecting the length of the years of the

patriarchs. We find that they were Solar, and that, although the Ancients only divided the Lunar year into weeks and months, yet they observed the annual revolution of the sun as a Solar period, the precise length of which they have known and observed better than we have.

The fifteen years or the Ancient Hebrew Solar Cycle are also proved by the Lunar Cycle, and show us that there has not been a day lost or added improperly since time began. Fifteen times nineteen are 285, therefore every 285th year is the first of the Solar Cycle, having Saturday on the seventh of the month as at Creation. It works in this way down to the present year, giving us a simple and unquestionable proof that the unbroken weeks of seven days have come down to us from Eden. It could not be otherwise with Lunar years which no man can alter if he tried. The Lunar Cycle is the natural production of Lunar time: We cannot fool or muddle about the Lunar year as we have done with the Solar periods. It is the production of the motions of the moon, and being sternly astronomical, we cannot alter it any more than we can the multiplication table. The eclipses and transits would mock us if we touched the Lunar Cycle, the Second Line of Astronomical Time. Alas ! They mock us now because we inherit *Pagan* time. We assign dates to them with which they have no proper concurrence.

Any history to which the Lunar Cycle will not apply must be rejected as spurious. That of Babylon and also that of Assyria are good, and have a close relationship to Scripture; but Chinese history is purely mythological earlier than 1796 A. M. which was soon after the dispersion from Babel.

Neither can any system of chronology be worth attention which is incompatible with this and other systematic scientific measurements. It is supreme folly to put 30 years into a Lunar

Cycle of 19 years, which must be done if the hap-hazzard systems of Hales and Deutch are followed. Of all the old chronologists Usher was the truest. His line of history commences 4004, instead of 3996 B. C., the true year of the Nativity, as chronologists now admit. Allow Usher these eight years and the length of his time is correct, but for want of a scientific system, he could not adjust some of the Biblical dates.

The great advantage of the Lunar Cycle is that it absolutely determines the precise succession of years and days. For instance, the Ancient Hebrew Solar Cycle began with 1722, hence, every 285th year must be the same as the first as to the dates of the Sabbath days. If the historical dates show that this was not so, it would be sure proof of a departure from a true consecutive record. It will also be seen that the first year of the Cycle always alternately ends with 2 or 7. Antediluvian time has this systematic precision by the Lunar Cycle in lengths of 133 years. This is grand work! Instead of doubting we must admire!

It will thus be seen that the Line of Time which I give in this book is one determined by astronomical data, and cannot be controverted. It is indeed supported by five astronomical lines and extends from Adam to the present time. All lines telling the same story. Nothing is left to the individual judgment. It is that known as the Hebrew version; but this is because it is the only one which bears the test of the controlling dates of Astronomical Cycles. As such it must hold its place whatever else may be stated concerning Chinese mythology. It is very remarkable that where reliable Chaldæan, Chinese, or Egyptian history commences, it is close to the period known as the Dispersion. Before this the tradition of these nations states that they were governed by gods, which is a reference to the patriarchs whose long lives and position entitled them to be

regarded as "Sons of God." My close and careful investigations show me that prior to the Dispersion there is no history, monumental or otherwise, except that obtained through the Hebrews. The epoch of Menes, which commenced the dynasties of Egypt, drawn up by Manetho, the priest of Heliopolis, three centuries B. C. began after the Dispersion. Thus we have:

The Scriptural Account, about.....	1770 A. M.
Beginning of Chaldean history.....	1770 "
Chinese history, the Hia.....	1796 "
Egyptian Epoch of Meno.....	1896 "

The Hebrew text gives us no precise dates for the Dispersion, but it is easy to see that it was rather better than a century after the Flood. The Babylonian cuneiform (wedge shape) tablets are copies of records made by the Accadians, who used the cuneiform system of writing and built the great cities of Chaldæa mentioned in Gen. 10:10, as Accad, etc.

I am, therefore, of opinion that as these Chaldæan, Chinese and Egyptian histories commence with the Dispersion, the mythological references are fragmentary allusions to the patriarchal period, which for its great scientific character we are bound to accept. Manetho states that the government of the Egyptians was first by gods; the Chinese state that they were ruled by gods and god descended men, and the system of time they keep is Lunar like that of the Antediluvians, Chaldæans, Ancient Babylonians and Hebrews; and it is also claimed that the great Pyramid of Egypt was built by Cheops, who flourished 120 years after the Dispersion.

THE ANCIENT HEBREW SOLAR CYCLE.

The Solar Cycle of fifteen years appears to have succeeded that of the Antediluvians in the beginning of 1722 A. M., which is 360 years before Abraham's call. It is so perfect that it supplies the days of the week for all the Biblical dates from that

period, and gives the dates of the old Sabbath days (Saturday) up to the present time.

The months have thirty and twenty-nine days alternately. The 13th or intercalary month at the end of each third year, has thirty-four days, except the middle intercalary period, table *i*, which has 35 days. Properly only thirty-three days (3 times 11,) are wanted to make the Lunar year of 354 days equal to the Solar year of 365, but the extra six days are necessary to float the full Lunar year, or motions of the moon, on with the Solar period.

As an astronomical table it is unequalled. Neither the Ancients nor we can alter it. There can be *no other* seventh days (Saturday) than those that are upon it, and this is the reason why it is verified by all the Biblical dates from Abraham.

In using this Solar Cycle for Biblical purposes the seventh month must always be called the first of the year (according to Divine command, Exodus 12:2), from the exodus of the Israelites in the seventh month 2513 A. M., table *L*. Therefore, seventh sacred month is the first civil month, the eighth sacred month is the second civil month, and so on. The intercalary month had no number. There is no Biblical date upon it, although the dates of Scripture run through it with scientific accuracy. As a civil regulation the Jews probably thought it would show a want of obedience to mention an intercalary date, and for this reason also Moses has given us no dates for Scripture history prior to the institution of the sacred order of the months, excepting those of the Flood.

HOW TO FIND THE YEARS.

The year given on the margin of the Bible is found by subtracting the B. C. year from 4004. Thus, 1491 from 4004 is 2513 A. M., the exodus.

The following were first years of this Solar Cycle of the

MO.	a.	b.	c.	d.	e.
1st	7 14 21 28	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27
2d	5 12 19 26	1 8 15 22 29	4 11 18 25	1 8 15 22 29	4 11 18 25
3d	4 11 18 25	7 14 21 28	3 10 17 24	7 14 21 28	3 10 17 24
4th	2 9 16 23	5 12 19 26	1 8 15 22 29	5 12 19 26	1 8 15 22 29
5th	1 8 15 22 29	4 11 18 25	7 14 21 28	4 11 18 25	7 14 21 28
6th	6 13 20 27	2 9 16 23	5 12 19 26	2 9 16 23	5 12 19 26
7th	5 12 19 26	1 8 15 22 29	4 11 18 25	1 8 15 22 29	4 11 18 25
8th	3 10 17 24	6 13 20 27	2 9 16 23	6 13 20 27	2 9 16 23
9th	2 9 16 23 30	5 12 19 26	1 8 15 22 29	5 12 19 26	1 8 15 22 29
10th	7 14 21 28	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27
11th	6 13 20 27	2 9 16 23 30	5 12 19 26	2 9 16 23 30	5 12 19 26
12th	4 11 18 25	7 14 21 28	3 10 17 24 2 9 16 23 30	7 14 21 28	3 10 17 24
MO.	f.	g.	h.	i.	j.
1st	2 9 16 23 30	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29
2d	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
3d	6 13 20 27	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26
4th	4 11 18 25	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
5th	3 10 17 24	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30
6th	1 8 15 22 29	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28
7th	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
8th	5 12 19 26	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25
9th	4 11 18 25	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
10th	2 9 16 23	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29
11th	1 8 15 22 29	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28
12th	6 13 20 27 5 12 19 26 33	3 10 17 24	6 13 20 27	2 9 16 23 1 8 15 22 29	5 12 19 26
MO.	k.	l.	m.	n.	o.
1st	4 11 18 25	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24
2d	2 9 16 23	5 12 19 26	2 9 16 23	5 12 19 26	1 8 15 22 29
3d	1 8 15 22 29	4 11 18 25	1 8 15 22 29	4 11 18 25	7 14 21 28
4th	6 13 20 27	2 9 16 23	6 13 20 27	2 9 16 23	5 12 19 26
5th	5 12 19 26	1 8 15 22 29	5 12 19 26	1 8 15 22 29	4 11 18 25
6th	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27	2 9 16 23
7th	2 9 16 23 30	5 12 19 26	2 9 16 23 30	5 12 19 26	1 8 15 22 29
8th	7 14 21 28	3 10 17 24	7 14 21 28	3 10 17 24	6 13 20 27
9th	6 13 20 27	2 9 16 23 30	6 13 20 27	2 9 16 23 30	5 12 19 26
10th	4 11 18 25	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24
11th	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27	2 9 16 23 30
12th	1 8 15 22 29	4 11 18 25 3 10 17 24 31	1 8 15 22 29	4 11 18 25	7 14 21 28 6 13 20 27 34

146

peri
up

The
has
whi
11,)
the
floa
Sola

cien
day
son

mor
to L
Isra
fore
sacr
terc
upo
scie
thou
terc
date
orde

sub1
251

Ancient Hebrew, that is table *a*. By knowing this, any intervening year is found. If, therefore, any year wanted is not in the list, take the nearest preceding one. For example, the Israelites marched out of Egypt in the seventh civil month of 2513; as the nearest preceding year in the list is 2502, and, of course, the first on the Cycle, we must count forward upon it until we arrive at 2513, which is table *L*.

*1722	2067	2412	2757	3102	3447	3792
1737	2082	2427	2772	3117	3462	3807
1752	2097	2442	2787	3132	3477	3822
1767	2112	2457	2802	*3147	3492	3837
1782	2127	2472	2817	3162	3507	3852
1797	2142	2487	2832	3177	3522	3867
1812	2157	2507	2847	3192	3537	3882
1827	2172	2517	*2862	3207	3552	3897
1842	2187	2532	2877	3222	3567	3912
1857	2202	2547	2892	3237	3582	3927
1872	2217	2562	2907	3252	3597	3942
1887	2232	*2577	2922	3267	3612	3957
1902	2247	2592	2937	3282	3627	3972
1917	2262	2607	2952	3297	3642	3987
1932	2277	2652	2967	3312	3657	*4002
1947	*2292	2637	2982	3327	3672	4017
1962	2307	2652	2997	3342	3687	4032
1977	2322	2667	3012	3357	3702	4047
1992	2337	2682	3027	3372	*3717	4062
*2007	2352	2697	3042	3387	3732	4077
2022	2367	2712	3057	3402	3747	4092
2037	2382	2727	3072	3417	3762	4107
2052	2397	2742	3087	*3432	3777	4122

Our 1879 A. D. began on table *a*, sixth of fourth month 5877. The Solar Cycle and eclipses prove us ONE YEAR, NINE MONTHS TOO FAST.

The first seventh day of all these years was the Sabbath, and as 1722 would have been the first year of the Antediluvian Solar Cycle it is a continuation of the seventh day from Eden. THE WEEK HAS NEVER BEEN BROKEN. The dates of all Scripture history show this. It is also proved by the Lunar Cycle of 285 years marked *. Fifteen times nineteen are 285. Hence, if we add 285 to the first line *1722 we will have 2007 and so on.

The years of the patriarchs from Noah to Abraham, like those from Adam to Noah are an accurate and most splendid record of Solar years. This is easily proved by noticing that the lines of the eclipses they requier are not broken by them. In this way science verifies each year.

The way by which we obtain the year 2082, when Abraham left Ur (a first year of this Cycle), is:

Gen. 7:11	Noah was 600 years at Flood.....	1656	A. M.
" 11:10	Arphaxad born after that "	2	years.
" 12	Salah born when Arphaxad was.....	35	"
" 14	Eber " Salah "	30	"
" 16	Peleg " Eber "	34	"
" 18	Reu " Peleg "	30	"
" 20	Serug " Reu "	32	"
" 22	Nahor " Serug "	30	"
" 24	Terah " Nahor "	29	"
" 32	Terah died when he was }	205	
" 12:4	Abraham was then 75 }		
		2083*	

* Terah left the city of Ur with Abraham on the fifteenth of the seventh month, 2032, table *a*, and died in Haran, 3083. Gen. 11:31.

HOW THE SOLAR CYCLE IS PROVED.

1. It is astronomical, being the movement of the moon.
2. It is perpetual and as true to-day as it was 4000 years ago at Herber's birth.
3. The 15 Songs of Degrees (Psalms 120: -134) represent the 15 years of the Solar Cycle.
5. A Solar Cycle of 15 years, but no other, will produce the Biblical dates and periods.

SELF-SAME DAYS.

Table *a* was 2082, when Abraham left Ur, and table *l* was 2513, when the exodus took place. The 7th months are alike in their dates of Sabbath days, therefore, the 15th of both would produce "*self-same day*" of the week (Tuesday) and date of the month. We read in Numbers 33: 3 that the Israelites left Egypt on the 15th of the first sacred month (7th civil) thus

showing in Exod. 12: 41, what Moses meant by "the end of the 430 years" falling on a self-same day.

Another self-same day is found in Ezek. 40: 1. In Chap. 33: 21, the Prophet says the city was smitten in the 12th year of the captivity, on the 5th day (Saturday) of the 10th month. The first six months of the captivity years fell on the one civil year, and the last six on the next one, as shown on the list of Captivity years; hence the 10th sacred (4th civil) month fell upon table *l*, which was 3418 A. M. Turning next to Chap. 11: 1, we read that in the 25th year of the Captivity "in the beginning of the year" that is 3431, on the 10th day of the month (first civil) "in the 14th year after the city was smitten" the hand of the Lord was upon me. This was Saturday again, table *o*. Both were Sabbath days and scientific.

"In the 3d (9th civil) month," Exod. 19: 1: table *l*, the Israelites entered the Wilderness of Sinai on the same day, that is first of the month, hence, the "third day," when the law was given was Tuesday, the 3d day of the week. It was also the 5th day (Pentecost) after the Passover in Egypt. Pentecost means 50th.

Our Lord was born on the end of the 3d month, 2996, table *j*, answering to our December.

The common Christian Era began with the 4th month of 4000, table *n*, which was year 1 A. D. It ought to have started with 4001, then 4002 would have been our 2, and so on. Owing to this blunder our years are 1 before A. M.

The Crucifixion was Friday, 15th of 7th civil (first sacred) month, table *m*, 4029, or 30 A. D. The Passover was eaten on Thursday evening, 14th. The 16th was Saturday, the Sabbath, and the 17th (Sunday) was Resurrection day.

The rich cluster of dates beginning Acts 20: 6 are 4058, or 59 A. D., table *l*. See Paul's Journey.

Table *k*, 2nd of 7th civil month (first sacred) is the date of Luke 6: 1, and should have been translated "2nd of first month."

CHAPTER VII.

The Death of Abel at the End of Intercalary Days.

THE Bible being the oldest writings in the world, we must use it to verify all the years since time was instituted. The date given in the Scriptures for the death of Abel is an interesting confirmation of the eleven weeks of SEVENTY-SEVEN INTERCALARY or extra days used by the Antediluvians at the end of each seventh year for making the Lunar and Solar year again start together on the same day. We find the date of Abel's death in the following simple way: The margin reading of Gen. 4: 3 reads "And at the end of days" it came to pass, etc. The real literal Hebrew is "And it was at the end of days." The meaning of this peculiar phrase is plain. It refers to the days at the end of the Solar Cycle of seven years. To prove this we may turn to 1 Kings 17: 7, where we have the same Hebrew expression in the margin used in connection with a year (3095) which had intercalary days, though they were in Elijah's time, less in number, as will afterwards be explained in reference to table *i*, (See Ancient Hebrew Solar Cycle); and it is worthy of notice that these intercalary days are on two or three other occasions, when the year of the Hebrews fell on table *i*, associated with sheep shearing and feasting. The churlish Nabal got drunk at this "feast of ingathering" of the fruits when he also sheared his sheep at the end of the days in the year 2945 (See 1st Sam. 25: 36, and also compare 2 Sam. 13: 23). There seems abundant evidence that there was a great similarity between the Patriarchal and Hebrew customs. But beyond this fact, we may further observe that the fruits of the earth at none of the end of the Lunar years assigned by chronologists as the period when Cain slew Abel could be ripe,

seeing that the Solar year was getting from two to three months late. We see, then, that these intercalary days falling next in precedence to the birth of Seth in the year 130, were those at the end of the year 125. The date of the sad catastrophe would be in "the end of the days," probably the seventy-seventh—a great Sabbath day—["And that Sabbath was an high day,"] actually ending the Solar year, but before the sun was down, the earth was reddened with Abel's blood.

The most interesting chronological point is the proof of the seventy-seven intercalary days and I think that Lamech's words associated with Cain's great crime in the end of these seventy-seven days have some historical connection with that, seeing that he expresses their number in a proverbial sense—"seventy and seven fold." Gen. 4: 24.

[Cain and Abel represented two classes that will exist in the world till the close of the present dispensation of time. One class avail themselves of the appointed sacrifice for sin; the other venture to depend upon their own merits; theirs is a sacrifice without the virtue of Divine mediation, and thus it is not able to bring man into favor with God. It is only through the merits of Jesus that our transgressions can be pardoned. Those who feel no need of the blood of Christ, who feel that without Divine grace they can by their own works secure the approval of God, are making the same mistake as did Cain. If they do not accept the cleansing blood they are under condemnation. There is no other provision made whereby they can be released from the thralldom of sin. No substitute will answer the Divine plan and appointment. "Without the shedding of blood there is no remission of sins."]

REMARKS CONCERNING YEARS.

I use the chronology of our English Bible in this work, that is, what is known as "The Hebrew text." The "Samari-

tan" and "Septuagint" are not astronomical, and therefore not worth a straw. Hales greatly erred by using them. This is a very important statement, but no more than 365 days can be put into a year, or more than seven, fifteen, or twenty-three years in a Solar Cycle, and nineteen years in a Lunar Cycle. These are stern astronomical facts which no man can alter, and all the dates of the Bible work upon them, preserving in the whole narratives the character of the Seventh Day.

HOW TO FIND ANY YEAR ON THE SOLAR CYCLES.

. In the present edition of the Bible (King James', 1879) the B. C. year given in the margin of the Old Testament is on the supposition that our Lord was born in the 4004 A. M., therefore, to find the year of the world that year must be used instead of 3996, which all chronologists now admit to be the correct one.

Example—To obtain the year of the departure of the Israelites from Egypt, the margin of the Bible at Exodus 12: gives 1491. Subtract this from..... 4004
1491

This is the Exodus year admitted by commentators 2513 A. M.

To find this 2513 on the Ancient Hebrew Solar Cycle, look at the list of the first years (that is those which always were table *a*) of the cycle. It will be seen that the nearest preceding year is 2502, which commenced the second. Now count forward and 2513 will be table *I*. All the dates in the Bible are found in this way, except a few marginal inaccuracies, which let us hope the revisers will rectify.

In noticing the dates in the Bible, the reader must bear in mind, what is stated more than once in this work, that the months are always used by the Hebrews in their sacred order. The seventh month being that in which the Israelites left

Egypt, it begins the sacred year and is called the first month. By this way, the twelfth civil is sixth sacred, and the first civil the seventh sacred month. Example: Daniel's vision, recorded in chapter 10:4, table *i* the twenty-fourth of the first month (Sabbath day) being the seventh proper or civil month of the year.

For the New Testament dates, the Crucifixion was table *m*, which is 4029 A. M., or 30 A. D. Our Lord was crucified on Friday, fifteenth of first sacred or seventh civil month. His body was in the tomb on the sixteenth (Sabbath day) and the seventeenth, Sunday, was the Resurrection day.

SUN STANDS STILL.

Herodotus tells us that the priests of Egypt showed him a record of a long day. This was probably the day in which the sun "stood still" in Joshua's time. We have another record of the same singular phenomenon found in the Chinese writings, which say that in the reign of Yeo, the sun did not set for the space of ten days (probably ten hours as then understood). At all events the reign of Yeo was contemporary with the period when Joshua flourished. We therefore seem to have three records of this event first mentioned in Joshua 10:13. A chronologist hopes that the same event which we read as "written in the Book of Jasher" will be found, and thus become a fourth, which it really is, because Jasher did not write the Book of Joshua. Some, however, did not regard Jasher as a man, but a collection of general and historical events referred to by the Seventy translators in the time of Ptolemy Philadelphus.

THE SABBATH DAY NOT OF HEBREW ORIGIN.

As all the Antediluvian dates and also those during the time of the postdiluvian patriarchs form into Solar Cycles, we have uncontrovertible evidence that weeks of Seven days were observed from the First Seventh day mentioned in Genesis 2.

Every man acquainted with scientific chronology knows that there is no Solar Cycle without weeks, and this is why our own dates come round again by bringing the same day of the week upon the same date of the month as at a known previous period, viz., after 28 years. That is to say, as Sunday was the 5th of January in 1868, it must of necessity fall on the same date in 1896. See the Solar Cycle of the Christian Era. This fact would occur every seven years did we not break the chain of dates every fourth year by having a leap year, which lengthens our Solar Cycle to four times seven. Now let the reader look at the Antediluvian Solar Cycle, where he will find the 17th day of the second month falls on the 7th day, Saturday, in the fifth year of that cycle. This, we are told in Gen. 7: 11, was the date of the Flood, and by comparing the first of the patriarchs given in Gen. 5 (see the table given in the page of the cycle in question), we learn that the year was 1656. Let the reader work out the cycle by sevens and he will find that the year No. 5 containing the Flood dates was 1656, hence we see that weeks of Seven days have been observed by the Antediluvians from the first Sabbath of year 0 to 1656. The table of first years of cycle given on a following page will help him to prove this, otherwise it is easily done by dividing 1656 by 7, and, of course, allowing the first year to be 0, as when we reckon the first of our life. This, however, is but one method of proving the observance of weeks of seven days by the Antediluvians. The application of the Lunar Cycle is a most powerful scientific test and is a triumphant proof of the same fact. The eclipse line of time is the third and the two transit lines of Mercury and Venus are others, so that he who says the Sabbath is of Hebrew origin is a very ignorant man. In like manner the emphatic expression of Moses in Exodus 12: 41, relative to the end of 430 years, could not fall on the same

day of the week and date of the month before the delivery of the Sabbath law without a continued observance of weeks of Seven days. Indeed, we have undeniable evidence that the Seventh day has never ceased to be observed. Great scientific facts show us that the Sabbath was kept 2,513 years before the Law was delivered from Mt. Sinai, 1,516 years by the Jews, from thence the Resurrection of Christ in 4029, and 1,553 years in the Christian Era up to 1883, when these lines were written. The three periods may be represented thus:

Before the law on Sinai	2,513 years
By Hebrews.....	1,516 "
By Christians.....	1,853 "
<hr/>	
To the time of this writing.....	5,882 "

[The Sabbath has thus been erroneously looked upon as Jewish, but it was observed by the Jews the shortest period of time.]

CHAPTER VIII.

The Literal Week.

AFTER what Mr. Dimbleby has said as a chronologist, astronomer, a profound scholar, and a genuine scientist, let us look back again at the *Word* and consider the first interrogation—(?) on the title of this book. Having done this we will interrogate the *Word*: For what purpose did God make the Heavenly Orbs? “And God made two great lights; the greater light to rule the day, and the lesser light to rule the night; He made the stars also.” (Gen. 1:16.) Did God make these luminaries for a specific and subservient purpose to man? “And God said, ‘Let there be lights in the firmament of the heaven *to divide the day from the night*; and let them be for *signs*, and for *seasons*, and for *days* and *years*.’ ” Gen. 1:14.

We know nothing in regard to Mr. Dimbleby's religious views farther than his writings in this work on “All Past Time,” which in the close of his work, or last article in this book which proves him *not* an *observer* of the *Seventh Day*. We cannot but admire the writer for his untiring persuance in the Periodical Cycles of the “Firmamental” Orbs, which the Psalmist says, “Declare the glory of God.” Psa. 19:1.

Before leaving this branch of the subject let us listen to another eminent writer on the subject of the *Literal Week*: “Like the First and the Seventh day, the week originated at Creation, and it has been preserved and brought down to us through Bible history. God himself measured off the first week as a sample for successive weeks to the close of time. Like every other week, it consisted of seven literal days. Six days

were employed in the work of Creation; upon the seventh, God rested, and He then blessed this day and set it apart as a day of rest for man. [This is no *Creed* but *Bible*.]

“In the law given from Sinai, God recognized the week, and the facts upon which it is based. After giving the command, ‘REMEMBER [*Something previously given then*,] the Sabbath day to keep it holy,’ and specifying what shall be done on the six days and what shall not be done on the seventh. He states the reason for thus observing the week by pointing back to His own example—‘For in six days the Lord made heaven and earth, the sea, and all that in them is, and rested the seventh day; wherefore the Lord blessed the seventh day, and hallowed it.’ (Ex. 20:8-11.) This reason appears beautiful and forcible when we understand the days of Creation to be literal. The first six days of each week are given to man for labor, because God employed the same period of the first week in the work of creation. On the [*each consecutive*] seventh day man is to refrain from labor in commemoration of the Creator’s rest.

“But the assumption that the events of the first week required thousands upon thousands of years, strikes directly at the foundation of the fourth commandment. [It matters not to the great adversary what is taught, so he can bring God’s Word in disrepute and doubt.] It represents the Creator as commanding men to observe the week of literal days in commemoration of *vast*, indefinite periods. This is unlike His method of dealing with His creatures. It makes indefinite and obscure that which He has made very plain. It is infidelity in its most insidious and hence most dangerous form; its real character is so disguised that it is held and taught by many who *profess* to believe the Bible.

“‘By the Word of the Lord were the heavens made, and all the host of them by the breath of His mouth.’ ‘For He

spake and it was done; He commanded and it stood fast.' (Ps. 33:69.) The Bible recognizes no long ages in which the earth was slowly evolved from chaos. Of each successive day of Creation, the sacred record declares that it consisted of an evening and a morning, like all other days that have followed. At the close of each day is given the result of the Creator's work. The statement is made at the close of the first week's record, '*these* are the generations of the heavens and the earth when they were created.' (Gen. 2:4.) But this does not contain the idea that the days of Creation were other than literal twenty-four hour days. Each day was called a generation, because that in it God generated, or produced, some new portion of his work.

"Geologists claim to find evidence from the earth itself that it is very much older than the Mosaic record teaches. Bones of men and animals, as well as instruments of warfare, petrified trees, etc., much larger than any that now exist, or that have existed for thousands of years, have been discovered, and from this it is inferred, that the earth was populated long before the time brought to view in the record of Creation, and by a race of beings vastly superior in size to any men now living. Such reasoning has led many professed Bible believers to adopt the position that the days of Creation were vast, indefinite periods.

"But apart from Bible history, geology can prove nothing. Those who reason so confidently upon its discoveries, have no adequate conception of the size of men, animals and trees before the Flood, or of the great changes which then took place. Relics found in the earth do give evidence of conditions differing in many respects from the present; but the time when these conditions existed, can be learned only from the Inspired

Record. In the history of the Flood, inspiration has explained that which geology could never fathom.

“In the days of Noah, men, animals and trees, many times larger than now exist, were buried, and thus preserved, as evidence to later generations that the Antediluvians perished by a flood. God designed that the discovery of these things should establish faith in Inspired history; but men with their vain reasoning, fall into the same error of reasoning as did the people before the Flood; the things which God gave them as a benefit they turn into a curse by making a wrong use of them.

“There is a constant effort made [by the adversary of all truth] to explain the work of Creation as the result of natural causes; and human reasoning is accepted even by professed Christians, in opposition to plain Scripture facts. There are many who oppose the investigation of the prophecies, especially those of Daniel and the Revelation, declaring them to be so obscure that we cannot understand them; yet these very persons eagerly receive the suppositions of geologists, in contradistinction to the Mosaic record. But if that which God has revealed is so difficult to understand, how inconsistent it is to accept mere suppositions in regard to that which he has not revealed!

“‘The secret things belong unto the Lord our God; but those things which are revealed, belong unto us and our children forever.’ Deut. 29: 29. Just how God accomplished the work of creation He has never revealed to men. Human science cannot search out the secrets of the Most High. His creative power is as incomprehensible as His existence.

“God has permitted a flood of light to be poured on the world, in both *science* and *art*; but when professedly scientific men treat upon these subjects from a merely human standpoint of view, they will assuredly come to wrong conclusions. It

may be innocent to speculate beyond what God's Word has revealed, if our theories do not contradict facts found in the Scriptures; but those who leave the Word of God and seek to account for His created works on scientific principles, are drifting, without chart or compass, upon an unknown ocean. The greatest minds, if *not* guided by the Word of God in their research, become bewildered in their attempts to trace the relations of science and revelation. Because the Creator and His works are so far beyond their comprehension that they are unable to explain them by natural laws, they regard Bible history as unreliable. Those who doubt the reliability of the records of the Old and New Testaments, will be led to go a step further and doubt the existence of the true God; and then, having lost their anchor, they are left to beat about upon the rocks of infidelity.

“There should be settled belief in the Divine authority of God's holy Word. The Bible is not to be tested by men's ideas of science. Human knowledge is an unreliable guide. Skeptics who read the Bible for the sake of caviling, may through an imperfect comprehension of either science or revelation, claim to find contradictions between them; but rightly understood, they are in perfect harmony. Moses wrote under the guidance of the Spirit of God; and a correct theory of geology will never claim discoveries that cannot be reconciled with his statements. All truth, whether in nature or revelation, is consistent with itself in all manifestations.

“In the Word of God many queries are raised that the most profound scholars can never answer. Attention is called to these subjects to show us how much there is, even among the common things of life, that finite minds, with all their boasted wisdom, can never fully understand.

“Yet men of science think that they can comprehend the

wisdom of God—that which He has done or can do. The idea largely prevails that He is restricted by His own laws. Men either deny or ignore His existence or think to explain everything, even the operation of His spirit upon the human heart, and they no longer reverence His name or fear His power. They do not believe in the supernatural, not understanding God's laws or His infinite power to work His will through them. As commonly used, the term 'laws of nature' comprises what men have been able to discover with regard to laws that govern the physical world; but how limited is their knowledge and how vast the field in which the Creator can work in harmony with His own laws, and yet wholly beyond the comprehension of finite beings!

"Many teach that matter possesses vital power—that certain properties are imparted to matter and it is then left to act through its own inherent energy, and that the operations of nature are conducted in harmony with fixed laws with which God himself cannot interfere. This is false science and is not sustained by the Word of God. Nature is the *servant* of her Creator. God does not *annul* His laws, nor work contrary to them; but He is continually using them as His instruments. Nature testifies of an intelligence, a presence, an active energy, that works in and through her laws. There is in Nature the continual working of the Father and the Son. Christ says: 'My Father worketh hitherto, and I work.' John 5: 17.

"The Levites, in their hymn recorded by Nehemiah, sung 'thou, even thou, art Lord alone; thou hast made Heaven, the heaven of Heavens, with all their hosts, the earth, and all things therein and thou *preservest* them all.' (Neh. 9: 6.) As regards this world, God's work of creation is completed, for 'the works were finished from the foundation of the world.' (Heb. 4: 3.) But His energy is still exerted in uphold-

ing the objects of His creation. It is not because the mechanism that has once been set in motion continues to act by its own inherent energy, that the pulse beats, and breath follows breath; but every breath, and every pulsation of the heart is an evidence of the all-pervading power, of Him in 'whom we live, and move, and have our being.' (Acts 17:28.) The hand of God guides the planets, and keeps them in their position and orderly march through the heavens. He 'bringeth out their host by number; He calleth them all by names by the greatness of His might, for that He is strong in power; not one faileth.' (Isa. 40:26.) God is the true foundation of everything. All true science is in harmony with His works; all true education leads to obedience to His government. Science opens new wonders to our view; she soars high, and explores new depths, but she brings nothing from her research that conflicts with Divine revelation. Ignorance may seek to support false views of God by appeals to science, but the book of nature and the written Word shed light upon each other. We are thus led to adore the Creator, and to have an intelligent trust in His Word.

"No finite mind can fully comprehend the existence, the power, the wisdom, or the works of the Infinite One. Says the sacred writer: 'Cans't thou by searching find out God? Cans't thou find out the Almighty to perfection? It is as high as Heaven; what cans't thou do? It is as deep as Hell; what cans't thou know? The measure thereof is longer than the earth, and broader than the sea.' (John 11:7-9.) The mightiest intellect of earth cannot comprehend God. Men may be ever searching, ever learning, and still there is an infinity beyond.

"Yet the works of creation testify of God's power and greatness. 'The heavens declare the glory of God; and the firmament sheweth His handiwork.' (Ps. 19:1.) Those

who take the written Word as their counsellor will find in science an aid to understand God. 'The invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead.' (Rom. 1: 20.)" Patriarchs and Prophets, pages 113-118.

THOUGHTS ON THE ABOVE.—THE EDEN ABOVE VS. BELOW.

When in Eden, the Literal Week we find,
God's creative act will come to mind;
God in the hearts of man, again adored,
Eden, anew, to man restored.

O, Eden's beauty!—in days of yore foretold;
Thy city, Jerusalem, when shall we see.
Or walk thy fair streets of gold,
At Eden's fountain drink, and eat of life's fair tree?

"Blessed are they that do His commands, (Rev. 22: 14.)
For on either side, life's river stands, (Rev. 22: 2.)
The tree of life, *twelve manner* of fruit to bear, (Rev. 22: 2.)
And the light of God and the Lamb, forever there." (Rev. 22: 5.)

"I, Jesus, have sent mine Angel to (Rev. 22: 16.)
Say unto the 'Churches' what they should do." (Rev. 22: 16.)
"I, John, saw these things; though sundered far, (Rev. 22: 1-8.)
And heard the voice—"I am...the bright and morning star." (Rev. 22: 16.)

'Tis now, "The spirit and the bride say"—View; (Rev. 22: 17.)
Twelve gates of pearl to enter through. (Rev. 21: 21.)
The spirit and the bride doth say:—"Whosoever
Will sup with me, my presence ne'er shall sever." (Rev. 21: 3; 22: 5.)

O, then to this Eden above let us go;
No sickness, no sorrow, the place shall know. (Isa. 33: 24.)
That Eden above, *restored to earth again*, (Acts 3: 21.)
The home of our Saviour and His children. Amen! (John 14: 3.)

CHAPTER IX.

March of the Children of Israel from Egypt.

THERE are a *few*, to say the very least, immovable monumental facts as irresistible to chronological astronomers as the rock of Gibraltar to a row-boat, respecting the long lives of the Antediluvian patriarchs, unless the allotted periods of time be allowed for their lives as stated in the Mosaic or Hebrew chronology in the Book of Genesis. The Flood could not have occurred in A. M. 1656, as given by Usher in Gen. 6. The sun and the moon had the same orbits in Ezekiel's, Daniel's, Isaiah's and Noah's time that they do now, and they occupied the same relation as to their governing *times* and *seasons*. We have seen that the ancient records of eclipses do fall on the same *corresponding dates* as anciently. Mr. Dimbleby is not alone in his computations. To doubt the accuracy of these Chronological Cycles or reoccurrences may be possible; yet, when it is done it certainly reveals the depth of intellect and comprehension possessed by the doubter. Men may place their own definition on the incidents recorded, but they must allow the *Time claimed by Biblical history*, to wit, 3996 Solar years before the birth of Christ. "It is hard to kick against the goads." It is also hard to doubt the *events* which are as infallible as the rising and setting suns. No intelligent investigator can conscientiously do so. See table on next page.

RETURN TO DIMBLEBY.

* There are three very important dates on the fifteenth of this month, viz., the departure of Abraham from the city of Ur in 2082, the march out of Egypt by the Israelites in 2513, and the crucifixion of Jesus Christ in 4029. The first one is

MARCH OF CHILDREN OF ISRAEL FROM EGYPT—DATE OF DELIVERY OF LAW, ETC.
Year 2513 A. M., Table I, the 12th of the Ancient Solar Cycle, 1483 B. C.

FIRST SACRED OR SEVENTH CIVIL MONTH.		SECOND SACRED OR EIGHTH CIVIL MONTH.		THIRD SACRED OR NINTH CIVIL MONTH.	
<p>(<i>March.</i>) Exodus 12:2. This ordered to be the 1st month of the sacred year.</p> <p>Lamb provided. Exod. 12: 2.</p> <p>Passover evening, 18, 19.</p> <p>The march out of Egypt. See Numbers 33:3.*</p>	Tu	Th	(<i>April.</i>)	(<i>May.</i>) Wilderness of Sinai.	F
	W	F	1	Ex. 19: 1.	2 S
	Th	S	2	"To-day and to-morrow."	3 S
	F	S	3	Ex. 19: 10.	4 M
	S	M	4	Delivery of THE LAW on "the	5 Tu
	S	Tu	5	third day" of the week, be-	6 W
	M	W	6	ing the 50th, or Pentecost,	7 Th
	Tu	Th	7	after the Passover. Verse 11.	8 F
	W	F	8		9 S
	Th	S	9		10 S
	W	S	10	Moses went up into the mount	11 M
	Th	M	11	and began the forty days	12 Tu
	F	Tu	12	and forty nights, which	13 W
	S	W	13	ended on the 20th of the	14 Th
	S	Th	14	next month, Friday.	15 F
	M	F	15	Verse 16.	16 S
	Tu	S	16		17 S
	W	S	17		18 M
	Th	M	18		19 Tu
	F	Tu	19		20 W
	S	W	20		21 Th
	S	Th	21		22 F
	M	F	22		23 S
	Tu	S	23		24 S
	W	S	24		25 M
	Th	M	25		26 Tu
	F	Tu	26		27 W
	S	W	27		28 Th
	S	Th	28		29 F
	M	F	29		30 S
	Tu	S	30		
	W	Th			

obtained by it being "the self-same day" of the week and date of the month as the date of the Exodus which formed the "end of the 430 years" mentioned in Ex. 12:41 and 51. The three dates are respectively on tables *a*, *l*, and *m* on the Solar Cycle.

It is interesting also to notice that the journey of St. Paul in 4058, from Greece through Macedonia to Palestine, occurred on this same twelfth year and third month of the Cycle, the numerous dates of which, as recorded by St. Luke, commencing Acts 20, are conclusive proof of the unalterable character of a Solar Cycle of Lunar years.

The length and character of the Exodus year—an intercalary one—will be seen by looking at table *l*, the twelfth of the Cycle which shows which months had alternately thirty days. There are no definite means of knowing the day when the Israelites crossed the Red Sea. But it seems to have been about six days after commencing the march.

The quails sent "at even" indicates that this supply was after sunset when the Sabbath was over on the seventeenth of the "second sacred month."

There is yet another point of interest connected with the Exodus dates. From the exode to the delivery of the law, and from the setting up of the tabernacle to the lifting up of the cloud were each fifty days.

The difference between B. C. given above and that in the margin of the Bible, is owing to the latter being taken from 4004 as the year of the birth of our Lord instead of 3996, which all scholars now admit to be the true year. It is time the erroneous year should be dropped, as it is often misleading.

THE DELUGE—120 YEARS TO THE FLOOD IN 1656.

Noah mentions in Genesis 7:13 that the Flood came on the earth on "the self-same day," that is, he entered the Ark

on the same day of the week and same day of the month as occurred at some special previous period. On looking at the Antediluvian Solar Cycle, the 5th of the seven years, we see that "the 17th of the second month," when he entered the Ark was Saturday, the old Sabbath day, in the year 1656, and that the same date fell on the same day of the week 120 years previously, viz., in 1536. (There are other instances in Scripture history of this significant completion of periods of time.) Thus the remarkable period of waiting for the repentance of the Antediluvians, mentioned in Genesis 6: 3, was completed to a day.

It is the Solar Cycle which brings round the date of the month on the same day of the week, as is the case with ours, but without the use of weeks of seven days no Solar Cycle exists. I therefore look upon this date of the Flood as the first proof that the Sabbath day was kept up from its institution in the year 0. There are numerous proofs of this character, and I would particularly impress upon public writers, if they wish to preserve the reputation of their names, not to theorize with Scripture history. In how many books have we been told that the Sabbath day was a Jewish institution? In how many volumes do we read of the Flood as having occurred at a period contradictory to all proper investigation and Scripture testimony? Such men might, more to their advantage, be engaged in stone-breaking than teaching the science of Chronology, of which they know nothing—not even so much as a simple Solar Cycle!

The prophecy of the Flood cannot be disassociated from the year 1656, because we see that nine of the ten dates, expressed or implied, in the diary of Noah, are dates of that year and first two months of the next.

As the dates are on the fifth year of the Cycle, it is a sim-

ple process of multiplication to see if the repetition of the Solar Cycle of seven years produces them for the fifth year and whether it was 1656. This was the first test which I made of the accuracy of a Biblical date, and when I saw how it could be done, I began the investigation with some hesitation, for fear I should detect an error and thereby supply means for rejecting the years given for the birth of all the Antediluvian patriarchs and the unbroken observance of the seventh day. In fact, I knew that the detection of an error, if it existed, would destroy all Biblical chronology. My joy was great when I saw that the consecutive repetition of 236 cycles made the first year of the cycle 1652; hence, the fifth year of the same cycle was 1656, the very year we obtain in Gen. 5 when we add the birth of the patriarchs to the 600th year of Noah, when the Flood occurred. This is most marvelous. More so when, as I afterwards saw, that the same accuracy was strictly supported by the Metonic or Lunar Cycle by the eclipse and two transit cycles. To these I invite the reader's attention, and here I wish also to state that I have never found an error in Biblical years. I am certain that if these men who doubt Scripture chronology would only investigate it by the light of advanced science they would indorse the whole of it. Let no man make assertions he cannot prove.

RESULT OF RECENT DISCOVERIES—THE SOJOURN.

“Four hundred and thirty years” sojourn of the children of Israel. (Ex. 12: 40.) It informs us that the sojourn of the children of Israel was 430 years, and “at the end of 430 years, even the self-same day it came to pass that the hosts of the Lord went out from the land of Egypt.”

The Solar Cycle of the ancient Hebrews shows us that the 15th of the seventh month was Tuesday when the Israelites

left Egypt in 2513, and the beginning of 430 years before that date was also Tuesday, the 15th of the seventh month in the year 2082. As Abraham left the city of Ur in this 2082 the words of Moses plainly refer to these two incidents forming the beginning and the end of the "sojourn." (Thus we see, we have the whole matter within a nutshell.) The period was thus completed to a day, called "the self-same day," because it was the same date of the month and the same day of the week. This marvelous precision is still more clear to us when we observe that to add 430 years to 2082 is 2512. But, Moses says "to the end of 430 years." Now as the seventh month is in the middle of 2082, that year is only six months of the 430; and hence the period of the sojourn must run to the middle of the next year 2513, to form the end of 430 years; otherwise the Exodus would have been in 2512. The fact is one year of the 430 is but six months of 2082, and six months of 2513. If the reader looks at the Solar Cycle he will see this at a glance. Table *a* is 2082 and table *i* is 2513. In both these years Saturday the Sabbath day in the seventh month was the 12th, therefore, Tuesday was the 15th. Compare Exodus 12:41, 51 with numbers 33:3, and bear in mind that the seventh month was called the first month after the Exodus.

THE CRUCIFIXION, 4029.

(This is the most important of all fulfilled periods of prophecy.)

It was not till the summer of 1883 that the full meaning of this very impressive prophecy was discovered [at least by many] viz., by Dr. Alder Smith of Christ's Hospital, London, to whom the religious world will forever be indebted. He has certainly accomplished in a few lines what eminent divines have been endeavoring during many centuries to arrange. [There seems to have been a just reason for any, or in fact, for no one understanding the prophetic period of Daniel until the

time appointed by Divine orders, namely:—"The time of the end." (Dan. 12: 4.) Now the time of the end is not the end of time in the sense that some in this case suppose; but the end of the prophetic period: namely, the 2300 days of Daniel 8: 14. From the ninth and tenth verses of the twelfth chapter of Daniel, it is evident that time was to continue from the following words: "But the wicked shall do wickedly.".... "But the wise shall understand." So we see both the wicked and the righteous were still together.]

This eminent scholar found that the years represented by days were not Solar, but Lunar. [Rather a prophetic period or prophetic time; a long period of Lunar years represented by Lunar weeks.] (Dan. 9: 25.) "From the going forth of the commandment to restore and build Jerusalem unto the Messiah, the Prince, shall be seven weeks and threescore and two weeks" (69 weeks).

"He shall confirm the covenant with many for one week, and in the midst of the week he shall cause the sacrifice and the oblation to cease." (Midst of a week is half a week).

Result—The sixty-nine and one-half weeks of Dan. 9: are $486\frac{1}{2}$ Lunar years, which are equal to 472 Solar years. The commandment went forth in the middle of Nisan, the seventh civil month and Jesus Christ was crucified in the middle of the seventh civil month early on Friday the 15th, the day after the Passover. See table *m* of the Ancient Hebrew Solar Cycle, also the years of the reigns of the Version Monarchs, showing that the twentieth of our Ariaxerxes was 3557 A. M.

Thus, 69 weeks, verses twenty-five and twenty-six.

7 multiplied into days,

483 called years.

$3\frac{1}{2}$ "midst of a week," verse twenty-seven.

Total $486\frac{1}{2}$ Lunar years are 472 Solar years.

Four hundred and seventy-two years from the twentieth year of Artaxerxes (Neh. 2:1), which was 3557 A. M., to 4029, when our Lord was crucified.

Hence, we have date of commandment to restore and build Jerusalem:

3557..... The twentieth of Artaxerxes.

472..... The above Solar years.

4029 A. M., year of Crucifixion which was our A. D. 30.

It will be seen by the Solar Cycle that table *m* is 4029, and that it must be the Crucifixion year, because Friday is the fifteenth of the seventh month, as shown by Saturday, the Sabbath day, being the sixteenth. The Passover was eaten "in the fourteenth day of the month, at even" (Numbers 9:3), and hence our Lord partook of it on Thursday the fourteenth, being the night before His crucifixion. I showed these facts to Dr. Alder Smith, who, although he had found that 472 Solar years formed a period of Daniel's great prophecy, was at that time unacquainted with the power of Solar Cycles for determining the day of the week on which dates fall, and also the true year of any event. I also showed him the twentieth year of Artaxerxes was certainly 3557, by consecutive counting from all other years of Persian monarchs mentioned in Scripture, more particularly the facts that the margin of Nehemiah 13:6 states that the thirty-second year of Artaxerxes was an intercalary one having extra days added to it, as shown by the words "at the end of the days," the same fact being also shown by the Solar Cycle (see table *c*, year 3569); and hence we have several proofs that table *f*, the twentieth year, was 3557.

The reader must look for himself at these interesting details.

The foregoing shows us that the half week (or the three and one-half day-years) of the seventy weeks mentioned in

Daniel 9: 24, are yet in the future, the present period being an interval formed in the midst of the seventieth week.

We also find, when compared with Section II. that:

1. Abraham left Ur on the fifteenth of the seventh month.
2. Israelites left Egypt fifteenth of the seventh month.
3. Jesus was crucified the fifteenth of the seventh month.

Therefore, every intelligent man, whether Jew or Christian, must see that Jesus is the Son of God, the date of His crucifixion being allied to the call of Abraham and the Exodus.

If the reader wishes to see more into the value of Daniel's 70 weeks, the following proof will be interesting. I have shown that 69 weeks multiplied by 7 produce 483 days, called prophetic years. To prove them to be Lunar we must multiply the 483 by 354, which is the number of days in a Lunar year. The product is 170,982 days, which turned into Solar years of 365 days each come to only $468\frac{1}{2}$ years. This is all we can make of them.

Thus 3557, the 20th of Artaxerxes, Nehemiah 2: 1.

$468\frac{1}{2}$ Solar years, as above.

$4025\frac{1}{2}$ A. M.

$3\frac{1}{2}$ the first half of the 70th week.

4029 A. M., Crucifixion.

Here we see that $468\frac{1}{2}$ Solar years contain the $486\frac{1}{2}$ Lunar years on the previous page, thus proving that the 69 weeks when multiplied by 7 to obtain the number of day-years (483) are Lunar years. They are also 26 Eclipse Cycles of 18 years each. It is interesting to notice that there was another representation of the 69 weeks of Daniel in the building of this second temple, which was finished in 3488. Ezr. 6: 15.

Thus, 3488 the temple completed.

Add 69 weeks to represent years.

3557 the 20th of Artaxerxes when he ordered the restoration of the city.

The following is the Solar and Lunar analysis and proves that the prophecy began in 3557, and ended in 4029. With the half week added they are $69\frac{1}{2}$ weeks and comprise $486\frac{1}{2}$ Lunar years, which are equal to 472 Solar years:

LUNAR	SOLAR
3557 date of command.....	3557
(a) 49 years for 7 weeks are.....	47 $\frac{1}{2}$ (d)
(b) 434 years for 62 weeks are.....	421 (e)
(c) 3 $\frac{1}{2}$ years for $\frac{1}{2}$ week are.....	3 $\frac{1}{2}$ (f)
69 $\frac{1}{2}$ weeks end	4029 A.M.
(a) 49.....	47 $\frac{1}{2}$ (d)
(b) 434.....	421 (e)
483	468 $\frac{1}{2}$
(c) 3 $\frac{1}{2}$	3 $\frac{1}{2}$ (f)
486 $\frac{1}{2}$ years equal to.....	472 Solar

How very accurate is our knowledge now of the seventy weeks of Daniel. The reader will bear in mind how the 20th year of Artaxerxes is proved to be 3557 by the thirty-second year being marked in the margin of the Bible as an intercalary year. The end of every third year was the intercalary period. It must also be borne in mind how the Solar Cycle shows that Friday, the crucifixion day, was the 15th of the seventh month 4029, table *m*.

I cannot repeat too often that nothing definite can be done in chronology without the use of the Solar Cycle. The difficulty which we formerly experienced respecting the history of Esther, all vanished when a glance was taken at the Solar Cycle, the dates fitting the sacred Hebrew year formed by the last six months of 3529, table *b*, and first six of 3530 table *i*, which was the 12th of Xerxes. Our difficulties about the seventy weeks of Daniel all vanished the same way by the employment of the Solar Cycle. Mr. Gratton Guinness is all wrong with his chronology for the simple reason that he uses

no Solar Cycle. If he had been a chronologist, he would not have published the book he has.

THE CAPTIVITY.

The first captivity period began in 3395 when Pharaoh Necho carried Jehoahaz captive to Egypt, as recorded in 2 Kings 23: 31 to 36, and ended in 3466. To add seventy to 3395 makes only 3465; but it began in the middle of the year, and therefore runs to the end of the first half of 3466, which was the first of Darius the Mede. Accordingly Daniel, who was carried captive with others in a first deportation of Hebrews to Babylon, by Nebuchadnezzar in 3398, seems to have expected the fulfillment in the first year of Jarius, 3466, and prayed to God. See Dan. 9: 2.

The second, or great period of the captivity began in 3456, which was eleven years after the first period commenced, viz., when the second deportation (carrying away) was effected by Nebuchadnezzar. (2 Kings: 24: 8-16.) It ended in 3476, a period of seventy years. It is easy to find each of these seventy years, because Ezekiel dates from them. See "Years of the Captivity" in this book, and "Ezekiel's dates," and notice them on the Solar Cycle which proves them and shows the day of the week.

CLEANSING OF THE SANCTUARY.

"Unto 2300 days then shall the sanctuary be cleansed."
Dan. 8: 14.

This is the first unfulfilled prophecy and relates to the cessation of the desolations of the Church of Christ. We have no definite means, as yet, for understanding their fulfillment; because, in the first place we do not know whether they are literal days connected with the great events belonging to the end of the present dispensation, or whether in the second place they are Lunar or Solar years, now in completion.

Should they not belong to the future, but to the present time, by being considered as years, their value may be 2230 Solar years, which are equal to 2300 Lunar years. But here again we are met with another difficulty, inasmuch as we do not know when they begin.

The chapter in Daniel in which the prophecy is found refers to the ascension of Alexander the Great, called the "he goat," and his conquest of Media represented as "a ram." Alexander ascended in 3660 and conquered the Medes in 3662.

The application of the two events would be after the following example:

Solar.	Lunar.
3660.....	3660
2230.....	2300
<hr/> 5890 our 1891.....	<hr/> 5960

As the sanctuary will be cleansed when the period has expired, the half of the seventh week of Daniel representing three and one-half years would be in them, and in that case stupendous events would be at hand, as they would begin in 1887½ A. D.

It may be, however, that the 2300 days are literal, (they are in the margin called evenings and mornings) and that during their fulfillment the sanctuary will be cleansed; for it seems that the present Christian dispensation is one of grace, an interval in the seventieth week of Daniel, and can be ended any moment. Then the remaining half of the seventieth week, which is three and one half weeks or 1260 days, so emphatically referred to five times in the book of Revelation, will begin.

In order to assist all inexperienced students, I should also state that "Time, Times, and a Half" are 1260 years. Thus a time is 360 years, times are twice 360, and a half a time 180. These 1260 days are referred to on five separate occasions in

the book of Revelation as "forty-two months" $3\frac{1}{2}$ years, or 1260 days. (Rev. 11:2, 3; 12:6, 14; 13:5.) It should also be remembered that 1260 Lunar years are equal to $1222\frac{1}{2}$ Solar years.

DAN. 6, 7 and 8; DAN. 12, 1260, 1290, and 1335 DAYS.

If these three periods are connected with the events which precede the cleansing of the sanctuary or other important events, they are literal days. They would be:

1260 days, are 3 years, or half a week.

30 more.

1290 days, Dan. 7: 11.

45 more.

1335 days, period of blessedness.

The period of Nebuchadnezzar's insanity in (Dan. 4) is thought by some persons to give light on this subject. It is "seven times, that is, seven times 360, or 2520 years." They are called "two seasons" in a cuneiform record, the meaning being two intercalary periods of three years each, as the insanity began at the end of the year 3434, which was an intercalary year, table c. (See verse 29). Twice 1260 are 2520, but if the years be Lunar, they are only equal to 2445 Solar. Thus,

3435 commencement of seven times.

$1222\frac{1}{2}$ first half, or 1260 Lunar years.

$4657\frac{1}{2}$ A. M. the desolation Mosque set up in the holy
 $1222\frac{1}{2}$ place, Jerusalem.

5880 Sept., our 1882.

This date witnessed great trouble in Egypt.

It is interesting to know that 2520 Lunar years are 2445

Solar, which is the same seventy-five years between Daniel's 1260 and 1335.

AN INTERESTING EVENT.

Dan. 10: 2-4 is beautifully interesting and shows the great advantage of pursuing all chronological studies by the powerful help of Solar Cycles. If we turn to table *i*, of the Ancient Hebrew Solar Cycle, we see that Daniel's three full weeks of fasting began on Saturday, Sabbath day, the third of the first month sacred, which is seventh civil and extended to the "24th" which he mentions in verse four. We find the year by subtracting 534, the B. C. year in the margin of the Bible from 4004, the old nativity date; the result is 3470, as the year of Daniel's fast. To find this 3470, it will be seen by the list of the first years of the successive cycles that 3462 was a first one, that is table *a*, hence, by counting forward, table *i* is 3470. The true B. C., 526, from 3996 gives the same result. It need scarcely be said that an intelligent mind will never surrender history of this kind for theories, because it would be just as easy to dislodge the sun from its position as to move the dates of Scripture. They are astronomical.

PROPHETIC PERIODS ARE CYCLES OF THE ECLIPSES.

It is very remarkable to find that the prophetic periods of Daniel are cycles of the eclipses; for instance, he not only records his visions in common with other prophets on the Sabbath day (See Dan. 10: 4 and the Ancient Hebrew Solar Cycle, table *i*, 20th of first month, which is the seventh civil), but his year like the Creation, the exode, the birth of Christ, etc., was the commencement of a Common Team of eclipses. His "time" (Chap. 12:7) known as 360 years, is twenty cycles of the Common Team and the full period, "time, times and an half" (1260 years) are seventy cycles of eighteen years each, the period when a Common Team of seventy cycles comes round.

Again, his 360 years are twenty-four Solar Cycles of fifteen years, his 1260 are eighty-four, his thirty are two, and his forty-five are three (verses 12, 13.) I must reserve these for another publication. But I find them a guide to their interpretation. [See table on following page.]

It must be admitted that although the chronology of the Resurrection is correct and astronomically true, yet the narrative is not consecutive. It is just such an one as we often have in a legal court when obtained from half a dozen independent witnesses. The following years to be the true outline as gathered up from the written testimony:

On the early morning of the Resurrection, Mary Magdalene, with certain other women came to the tomb and found the stone removed. Mary, in alarm, thinking that the body had been taken away, ran to Peter and John, who, sharing her fears, hastened to the tomb followed by Mary. John in anxious haste out-ran Peter, but seeing the grave-clothes very neatly folded up and no corpse, started back in consternation. Peter coming up entered the tomb and was followed by John, and both being convinced that the body was not there returned to their habitation. Before the arrival of Peter and John, the other two women who came with Mary entered the tomb and saw an angel, who told them that Christ had risen and that they must go and tell it to the disciples. As they were on their way the Saviour appeared to them, and also told them to go to the disciples, they having seen Him. After this our Lord appeared to Mary, who had remained at the Sepulcher when Peter and John had left, which is just what a distressed woman would do. Towards evening two disciples were walking to Emmaus, seven miles distant; the risen Lord joined them, and when they subsequently recognized Him, He passed from their observation. They therefore hurried back, running and walking in

DATES OF THE CRUCIFIXION AND RESURRECTION OF JESUS CHRIST.—ASCENSION AND PENTECOST DAYS.
Year 4029 A. M., Table m, or 13th of the Hebrew Solar Cycle, 30 of the Christian Era.

FIRST SACRED OR SEVENTH CIVIL MONTH.							SECOND SACRED OR EIGHTH CIVIL MONTH.							THIRD SACRED OR NINTH CIVIL MONTH.						
Correspond to our March.							Correspond to (April.)							Correspond to (May.)						
1 F	2 S	3 S	4 M	5 Tu	6 W	7 Th	1 S	2 M	3 Tu	4 W	5 Th	6 F	7 S	1 M	2 Tu	3 W	4 Th	5 F	6 S	7 S
8 F	9 S	10 S	11 M	12 Tu	13 W	14 Th	8 S	9 M	10 Tu	11 W	12 Th	13 F	14 S	8 M	9 Tu	10 W	11 Th	12 F	13 S	14 S
15 F	16 S	17 S	18 M	19 Tu	20 W	21 Th	15 S	16 M	17 Tu	18 W	19 Th	20 F	21 S	15 M	16 Tu	17 W	18 Th	19 F	20 S	21 S
22 F	23 S	24 S	25 M	26 Tu	27 W	28 Th	22 S	23 M	24 Tu	25 W	26 Th	27 F	28 S	22 M	23 Tu	24 W	25 Th	26 F	27 S	28 S
29 F	30 S						29 S							29 M	30 Tu					
John 12: 1. Christ at Bethany. Anointed by Mary. Entry into Jerusalem							Ascension on 40th day. Acts 1: 3.							Pentecost, 50 days after the resurrection and anni- versary of the delivery of the law.						
Passover at even.* CRUCIFIXION. In the Sepulchre. Resurrection on 3rd day.																				
John 20: 26.																				

* "Thou shalt sacrifice the Passover at even, at the going down of the sun." Deut. 16: 6.

their excitement to confirm the statement of the women, but on seeing the apostles, were told that the Lord had sometime since they saw Him appeared to Peter. In the evening of the same day the manifestation of Christ so graphically described by St. John (14:27) took place before all the apostles except Thomas. On the next Sunday evening He appeared to them again, Thomas being present. Another subsequent appearance was when seven of the disciples were fishing (John 21:14), and the next recorded visible presence was to the apostles in Gallilee. Following this the Lord appeared to James (1Cor. 15:7), with whom He probably made the appointment to meet the disciples on the Mount of Olives, when "500 brethren" assembled, and probably most of them witnessed the Ascension.

Interpretation of the Word a Vital Point.

It is not the purpose of the author of this compilation to assume the prerogative of an expounder of the Word of God; this we have previously stated. We verily believe the Word is its own interpreter; neither would we wish to act as an arbitrator between man and man, for upon that subject every intelligent person is held amenable to his Creator alone. Yet, we believe it our duty in this *particular* work that we have taken in hand, to "rightly divide the Word of truth" to the best of our ability.

We have given Prof. J. B. Dimbleby's article, on the subject of the Sanctuary and the 2,300 days, the Crucifixion, etc., complete, because of the cycles which we believe he has accurately given, establishing other historical records and events, which establishes beyond the shadow of a doubt the Divine authenticity of the book we call the Bible. We now believe it our duty to call attention to a vital point in the article of the Sanctuary. This, without the aid of the infallible chart, the Word of God, would surely be misleading.

The entire misunderstanding with Mr. Dimbleby seems to be in not understanding. First, what the Sanctuary was. Second, what was its use; or the relations it sustained to the inhabitation of the Christian dispensation. In order to see the dilemma and muddle Mr. Dimbleby has gotten into, we will only quote his own words. We turn back a little to the heading of the article on the Crucifixion and read thus: "This eminent scholar (referring to Dr. Alder Smith) found that the years represented by *days* were not *Solar*, but *Lunar*." Again a few more lines further on he says: "The sixty-nine and one-half weeks of Dan. 9, are $486\frac{1}{2}$ *Lunar years*, which are equal to 472 *Solar years*." Now we go forward a page or so to the heading of his article, "Cleansing of the Sanctuary," and find under the first short paragraph the words: "This is the first unfulfilled prophecy and *relates* to the *cessation* of the *desolations* of the Church of Christ." Again he says: "We have no definite means, as yet, for understanding their fulfillment; because, in the first place we do '*not know*' whether they are literal days connected with the great events belonging to the end of the present dispensation, or whether in the second place they are *Lunar* or *Solar years* now in completion." He sums up the matter thus: "The application of these two events would be after the following example: If Solar time 5890 our 1891 (but if) Lunar 5960."

"As the sanctuary will be cleansed when the period has expired, the half of the seventieth week of Dan., representing three and one-half years, would be in them, and in that case stupendous events would be at hand, as they would begin in 1887 $\frac{1}{2}$ A. D."

His article was written in A. D., 1885.

Again, he says, "It may be, however, that the 2,300 days are literal, (they are in the margin called evenings and

mornings) and that during their fulfillment the sanctuary will be cleansed; for it seems that the present Christian dispensation is one of grace, an interval in the seventieth week of Dan., and can be ended at any time.

"In order to assist all inexperienced students I should also state that 'time, times, and a half,' are 1260 years. Thus, a time is 360 years, times are twice 360, and a half time 180," [which = 1260.]

The last paragraph in regard to the assistance of the "inexperienced" may be kindly regarded on his part, but of what use to mortal man can these days be, if we know neither the end nor the beginning to whom or where they apply? They would be as useless to "the inexperienced" as would the satellites of Jupiter.

We have seen that the two periods in which Mr. D. had looked for a fulfillment of the days in question have passed, namely, the years A. D. 1887½ and 1891, and the events not yet transpired, for which he evidently looked, namely, the transaction of a cleansing process, to transpire on this earth during the Christian dispensation, a promise of which cannot be found in the Word of God. "The wheat and the tares will grow together until the harvest," "the harvest is the end of the world, and the reapers are the angels." (See Luke 13: 30, 39.) We believe a just and true solution can be given upon this subject from the inspired Word, and the matter put beyond doubt.

It is a little singular, that after Mr. Dimbleby had found the commencement or starting point for the 2300 days, and then found the exact point in those days, where the Messiah was "*cut off*" or crucified, that he should know nothing about the length of days that existed between the two given points, or the nature of the days. It seems about like this: Mr. D.,

with others, was looking with such positive assurance for an *event* to transpire, which they had fixed in their minds, at a certain time; the events for which they looked not having transpired, they were dismayed and confused.

In order to come to a definite conclusion in regard to the nature of the days referred to by Mr. D., we only have to refer to a few passages of Scripture. First, that the days were symbolical, we conclude from this fact: they were uttered in the place of, and in connection with a symbolical prophecy.

We look at Daniel 7: 16, 17, for a solution of the first proposition: "I came near unto one of them that stood by, [an angel previously mentioned] and asked him the truth of all this. So he told me, and made me know the interpretation of the things." (16.)

"These great beasts, which are four, are four kings, which shall arise out of the earth." (17.)

We understand by this that the angel would have Daniel understand the "truth" for which he inquired, namely, that these beasts were not absolute kings, but that they represented or *symbolized* four kingdoms. Kings implies kingdoms.

In order to determine what the symbol of a prophetic year is we turn to Ezekiel 4: 6, and we find the following are the declarations of an angel: "And thou shalt bear the iniquity of the house of Judah forty days; I have appointed thee each day for a year." Again Num. 14: 34 gives the same period as a symbol. "After the number of the days in which ye searched the land, even forty days, each day for a year, shall ye bear your iniquities, even forty years, and ye shall know my breach of promise." Now, let us see if we can find out from another inspired source the definition of a week of years, or what reasons we have for thus applying it. Dan. 4: 25 says: "They

shall drive thee from men, and thy dwelling shall be with the beasts of the field, and they shall make thee to eat grass as oxen, and they shall wet thee with the dew of heaven, and seven times shall pass over thee, till thou know that the most High ruleth in the kingdom of men, and giveth it to whomsoever He will."

Josephus tells us that the days of Nebuchadnezzar's insanity in which he escaped the search of men, was seven years; then here we have the week of years.

Now if we turn to Rev. 11: 2, 3, we have the same prophetic period, or a section of the entire 2300 days, namely 1260 years in two other forms as follows: "And the holy city shall they tread under foot forty and two months." Again 42 months, 30 days to the month Roman time, 42×30 equals 1260 years. Third verse, (latter clause) "a thousand two hundred and threescore days" which equals 1260 years. Once more—Dan. 9: 24-27 gives the explanation of the Messiah's time in which the gospel was to go, and the oblation to cease, the cutting off or the crucifying of the Saviour. Thus we have the terms of days, weeks, months and times, all symbolical of one and the same period of time, and as we never knew of more nor less days than seven days (7) in a week, and as portions of the *symbolical days* are counted by year-weeks, or cycles of seven years, can we consistently count the time in any other way than cycles of seven years each?

We will now turn the reader over to another writer who has given an able solution of this very important subject as the reader will see. Prof. U. Smith has given us permission to copy his article from "Synopsis of Present Truth," which here follows, and in it we shall see just what bearing it has upon the present generations, and what was to be its cleansing. We shall find that that which was to the Hebrew

people a type to be fulfilled, is to us the antitype met in this present dispensation and generation. Hence, the vital importance to you and to me, and every human being. May it be considered with care, that the reader may profit thereby, is the earnest desire of the writer.

CHAPTER X.

The Seventy Weeks and Twenty-three Hundred Days.

IN the ninth chapter of Daniel we find a further explanation of Daniel eight. Mark the connection between the two chapters. First: Gabriel appears again to Daniel, verse twenty-one, the very one who in the vision of chapter eight had been commanded to make him understand that vision, but who had not yet completed that mission. Second: Daniel refers to the vision at the beginning in which he had seen this angel. This must be the vision of chapter eight, as no other had intervened between that and this. Third: Gabriel said, "I am now come forth to give thee skill and understanding," the very work he was intrusted with in chapter eight, but had been obliged on Daniel's account, to postpone. Fourth: The angel then himself refers back to the vision of chapter eight, saying, "understand the matter" and consider "the vision." Fifth: He then commenced with the very matter omitted in chapter eight, namely, the explanation of the time: "Seventy weeks are determined upon thy people." The word here rendered determined, signifies "cut-off." Seventy weeks are cut off; from what? From the 2300 days. Wherever the seventy weeks commence, there the 2300 days begin, [or commence.]

Gabriel then proceeds to give the starting point. When a commandment should go forth to restore and build Jerusalem, the seventy weeks would begin. The first decree that was issued after this time, in any way affecting Jerusalem, was the decree of Cyrus, B. C. 536, for the return of the Jews and the rebuilding of the temple. (Ez. 1.) But this only provided for

the temple, and fell far short of granting the "restoration" to which the prophecy points. This work was hindered by the enemies of the Jews in the reign of Artaxerxes the Magian, B. C. 522. (Ez. 4.) The decree of Cyrus was reaffirmed by Darius Hystaspes, B. C. 519, and the work on the temple again went forward. But this decree like that of Cyrus was too limited in its provisions. At length Ezra obtained a decree from Artaxerxes Longimanus, in the seventh year of his reign, B. C. 457, (Ez. 7: 7) containing provisions for the complete restoration of the Jewish State. This decree, written in the original in Chaldæic or Eastern Aramaic, the language of the Persian court, is found in full in Ez. 7:12-23. When this went forth the prophecy was met, all three of the decrees constituting "the commandment," as expressed in Ez. 6:14, and the date of its going forth being that point when the last one with its full provision, was carried into effect by Ezra. (Ez. 7: 9.) The commission to Nehemiah thirteen years later, was no decree, and is not to be taken into the account.

Seven weeks or forty-nine years were allotted to the literal work of building the city and arranging the affairs of the State. This was completed in the last act of reformation by Nehemiah, in the fifteenth year of Darius Nothus, B. C. 408, exactly forty-nine years from the commencement of the work by Ezra, B. C. 457. Sixty-two weeks, 434 years more, were to extend to Messiah the Prince. Christ was set forth as the Messiah, or the Anointed at His baptism when He was anointed with the Holy Ghost. (Acts 10: 37, 38; 4: 27; Luke 4: 18, etc.) This period, therefore, reaches to His ministry, which commenced A. D. 27. For John began his ministry in the fifteenth year of Tiberius Cæsar, (Luke 3: 1) which was in A. D. 27, and Christ entered upon His work six months later, which would bring us to the autumn of that year. And to

this point exactly, the sixty-nine weeks or 483 years bring us, reckoned from B. C. 457 in the autumn when Ezra commenced his work at Jerusalem. Here Christ went forth proclaiming "The time is fulfilled," (Mark 1:15), which can have reference to nothing else but the fulfillment of this period which was to bring us to Messiah the Prince.

After the seven weeks and the sixty-two weeks He was to be cut off, or in the middle of the seventieth week, cause the sacrifice and oblation to cease. These expressions point unmistakably to the crucifixion of Christ. The ministry of Christ continued just three years and a half, for he attended but four passovers, at the last of which he was crucified. (John 2:13; 5:1; 6:4; 13:1.) If the sixty-ninth week ended in the autumn of A. D. 27, the middle of the seventieth week, three and a half years further on would be in the spring of A. D. 31, and right there the crucifixion took place. (See Hale's Chronology.) We go forward three years and a half more to the termination of that week, and find ourselves at the end of the seventy weeks in the autumn of A. D. 34. How much yet remains of the 2300 years? $2300 - 490 = 1810$; add 34 to $1810 = 1844$, where the whole period of 2300 years expired. So definitely and easily is the application of this period of 2300 years ascertained. The seventh year of Artaxerxes when Ezra received his commission is placed in B. C. 457 by Ptolemy's canon, and the accuracy of that canon is demonstrated by the concurrent agreement of more than twenty eclipses. The starting point for the 2300 days cannot, therefore, be moved from B. C. 457 without showing the inaccuracy of Ptolemy's record of these eclipses. But Prideaux says that they have been repeatedly calculated and have been found invariably to fall where Ptolemy has placed them. Connections, Vol. 1, p. 242.

THE SANCTUARY.

"The prophecy of Dan. 8:14 simply declares that at the end of 2300 days the sanctuary shall be cleansed. The subject of the sanctuary thus becomes the central and controlling question in this prophecy. If we regard it as something which is to be cleansed only at the coming of Christ, then the 2300 days must extend to Christ's coming. Many hold it in this light, and hence their continual efforts to readjust the prophetic periods and set new times for the Lord to come.

The word sanctuary occurs in the Bible 144 times, and both the definition of the word and its use show it to mean a holy or a sacred place, and a dwelling place for God. This fact should guard any one against applying it to any object which will not bear this definition, or to which it is not applied in the Scriptures.

The earth is not the sanctuary for it is not a holy or sacred place, and the Scriptures never call it the sanctuary.

The land of Canaan is not the sanctuary for the same reasons. Neither can the term be applied to any limited portion of the land, as to Jerusalem or Mt. Zion; for though these were spoken of while the Hebrew people maintained the favor of God, as holy and a place where God would dwell, it is evidently because His temple was there, which He had caused to be erected for His habitation. For this reason Moses once speaks of the mountain of inheritance as the sanctuary, (Ex. 15:17), just as David calls Judah in one instance the sanctuary, (Ps. 114:2) and in another instance Mt. Zion (Ps. 78:68); but the tribe was not the mountain any more than the mountain was the sanctuary; but the tribe possessed the mountain and upon the mountain was the sanctuary "built," says David, like "high palaces." (Ps. 78:69.) However, Paul settles the question so far as pertains to the whole Mosaic dispensation covered

by the first covenant, and tells us emphatically that another object was the sanctuary during that time. Heb. 9:1, 2.

The Church is not the sanctuary, for it is nowhere called such. One text, mentioned above, (Ps. 114:2) is sometimes quoted to prove the Church the sanctuary; but that has been already explained, and even if it was to be taken in its most rigidly literal sense, it would only prove that a particular tribe, and not the whole Church was the sanctuary. But the statement quoted from Paul (Heb. 9:1, 2) applies to this very time when Judah constituted a portion of God's people, and he tells us that something else was then the sanctuary. And further, if the Church ever constituted the sanctuary, even then it could not be the sanctuary of Dan. 8:14; for there the Church is brought to view by the term "host" as an object entirely distinct from the sanctuary.

But to return to Paul's statement in Heb. 9:1, 2. What is that which he says was the sanctuary during the continuance of the first covenant? Answer, the tabernacle built by Moses in the wilderness of Sinai, which was afterward embodied in the temples of Solomon, Zerubbabel, and Herod. This is described in full in Ex. 25, and onward. This settles the subject of the sanctuary down to the time of Christ. The only question now to be decided is: Has there been a sanctuary since that time? and, if so, what?

These questions are definitely answered in the writings of Paul. He says that the second covenant has a sanctuary, the same as the first. The new covenant was introduced and ratified by Christ. He is its minister. His ministry is performed in Heaven. He is there a minister of the sanctuary, the true tabernacle, which the Lord pitched and not man. (Heb. 8:1, 2.) The sanctuary of this covenant is, therefore, where the minister is, in Heaven. The sanctuary of the first covenant

was a type of the heavenly sanctuary (or) the new. Moses, when he made the tabernacle, made it after a pattern. (Ex. 35: 9, 40; 26: 30; Acts 7: 44; Heb. 8: 5.) That was made with hands (by men) (Heb. 9: 24); the one in Heaven, not by men, but by the Lord, (Heb. 8: 2; 9: 11.) The earthly sanctuary is twice called a figure, and once a pattern of the sanctuary in Heaven. (Heb. 9: 9, 23, 24.) The heavenly sanctuary is called the greater and more perfect tabernacle, and the true, in comparison with the earthly. Heb. 9: 11, 24.

But more than this, John in his vision of things in Heaven saw there the antitype of the golden candlestick, the altar of incense, the golden censer, and the ark of God's testament, all instruments of the sanctuary, the presence of which unmistakably proves the existence of the sanctuary where they were seen. And John also had a view of the sanctuary itself, which he brings to view under the name of "The Temple of God in Heaven." (Rev. 4:1, 5; 8:3; 11:19.) Thus it is called also by David and Habakkuk. (Ps. 11: 4; Hab. 2: 20.) It is called God's "holy habitation" by Jeremiah and Zachariah. Jer. 25: 30; Zech. 2: 13.

Having found the sanctuary, we now inquire, what is its cleansing? With the sanctuary there were connected instruments of service and a priesthood. The sanctuary contained two apartments, separated by a vail. The first was called the holy place, the second the most holy. In the holy place were the candlestick with seven branches, the table of show-bread and the altar of incense. In the most holy was the ark, containing the tables of the ten commandments. The cover of the ark, beaten out of a solid piece of gold with the figure of a cherub on either end, was the mercy-seat. In this sanctuary the priests ministered. This ministry is described in Lev. 1 and onward. When a person had sinned, he brought his

offering to the door of the tabernacle to the priest, laid his hands upon the head of his offering, and confessed upon him his sin, took his life, and the blood was taken by the priest into the sanctuary and sprinkled before the vail. His sin was thus transferred to the sanctuary. This went on through the year continually, sin all the time accumulating in the sanctuary till the tenth day of the seventh month, when the priest performed a special service in the most holy place, to close the yearly round of ministration, called the cleansing of the sanctuary. On this day two goats were brought and set apart by lot to the Lord and to Azazel. (See Lev. 16: 8, margin.) The blood of the goat for the Lord was taken and sprinkled by the priest upon the mercy-seat in the most holy place, to make atonement for the sanctuary and for the sins of the people. Coming out he confessed over the scape-goat all the sins of the people and thus placed them upon his head. (Lev. 16: 21.) This goat was then sent away by the hand of a fit man into the wilderness. Thus the sanctuary was cleansed and sin was put away from the people.

But all this was a figure. That sanctuary, those offerings, the work of the priests, all were figures. Paul says of the priests that they "served unto the example and shadow of heavenly things." Heb. 8: 4, 5.

All looked forward to the greater and more perfect priesthood after the order of Melchisedec, performed, Paul says, by Christ in Heaven. Christ is at once the antitype of the offering and the priesthood. He first shed His blood and provided the offering. Then He entered upon His work as priest. What the earthly priests did in figure, He does in fact. They transferred the sins of the penitent to the earthly sanctuary in figure. He transfers them to the Heavenly sanctuary in fact, where Christ our High Priest has entered. We come to Christ

for pardon and this is the way we receive it. To deny this is to deny all that Paul has taught us in the book of Hebrews respecting the relation of the work of those ancient priests to the work of Christ as our High Priest in heaven.

The heavenly sanctuary must be cleansed for the same reason that the earthly was cleansed. This Paul expressly states. (Heb. 9:22, 23.) Any one who objects to things being cleansed in heaven, must settle that with the apostle. The cleansing, however, was not from physical uncleanness, but from sin. When was this to be cleansed? At the end of 2300 days in 1844. There was no other sanctuary then in existence [to meet the requirements of the declaration of the Angel to Daniel], but the heavenly sanctuary of the new covenant; hence, that is the one to which that prophecy applies. How is the cleansing in this case to be performed? Just as in the type, by a closing service in the most holy place. The high priest passes into the most holy which he enters only for this purpose, makes the atonement by the offering of the blood upon the mercy-seat, and closes the round of sanctuary service.

In the type this round was completed every year. In the antitype it is performed once for all. The type and the prophecy of the 2300 days hold us to the conclusion that in 1844 Christ entered upon his final act as Priest in the second apartment of the sanctuary in Heaven. In the type one day of the year was set apart to this work, and a portion of the day was actually employed in the service. In the antitype the time is indefinite, but it must be comparatively brief.

As this concludes Christ's work as priest, with it probation ends, as there is no more mercy to be offered. And when that point is reached all classes are decided for eternity. But this work of decision is a work of investigative judgment. It

must be the first part of that threefold work of judgment solemnly declared in God's Word to await all mankind, first: to decide all cases; secondly: to determine the rewards or punishments; thirdly: to execute the sentence written. But Christ does not make His second advent till His work as priest is done. Therefore, before the coming of Christ, a portion of the work of Judgment transpires and probation ends. This accords with Rev. 22: 11, 12: "He that is unjust let him be unjust still, . . . and he that is holy let him be holy still. And, behold, I come quickly." It accords also with the necessities of the case, for when Christ appears there is no time allotted for a work of Judgment, yet all the righteous dead are then raised, leaving the wicked to sleep on for a thousand years, and all the righteous living are changed in a moment, in the twinkling of an eye. This conclusively shows that decision must have been rendered in their cases before the coming of the Lord.

In the cleansing of the sanctuary we have just the time and place for this preliminary or investigating work of Judgment. This is the very nature of the work of Christ at this time to put away sin and so decide who are righteous. This involves an examination of the books of record containing the deeds of every man's life; for all judgment is rendered according to every man's work written in the books. (Rev. 20: 12.) Hence, in the account of the opening of this scene in the most holy of the Heavenly Sanctuary, as given in Dan. 7: 9, 10, we read that "the Judgment was set and the books were opened." This is before the coming of Christ, for it is before the destruction of the [ten-horned] beast on account of the great words of the little horn. (Verse 11.) Here is where the Son of Man is brought to the Ancient of Days, and receives His kingdom,

which kingdom He receives before His return to this earth. Dan. 7:13,14; Luke 19:12.

Here sins, repented of and pardoned, are blotted out (Acts 3:19, 20); which work being ended, Christ is sent the second time to this earth. But if at this time a person's sins are not in a condition to be blotted out, his name is blotted out of the Book of Life. (Rev. 3:5.) Here Christ confesses the names of His people before His Father, receiving of the Father acceptance of them through Him.

This is the finishing of the mystery of God, brought to view in Rev. 10:7. The mystery of God is the gospel to all nations. (Eph. 3:3 compared with Gal. 1:12; Eph. 1:9, 3:9; Rom. 16:25, 26; Col. 1:25, 27) The finishing of this mystery must be the close of the gospel work which will cease when Christ's work as priest is done. Therefore, the cleansing of the sanctuary, the investigative Judgment, and the finishing of the mystery of God, are all one and the same work.

The commencement of this work is marked by the end of the great period of 2300 days, and the commencement of the sounding of the seventh angel, the last of the series of the seven trumpets. The angel of Rev. 10:6 announces the close of the prophetic time. This must be prophetic time, for literal time, duration, continues in the days of the seventh angel subsequently mentioned, and probationary time continues in the announcement of another message of mercy. (Verse 11.) Prophetic time ends with 2300 days, which is the longest prophetic period and reaches down to the latest point. Hence, Rev. 10:6 brings us to the conclusion of 2300 days. Then, said the angel to Daniel, shall the sanctuary be cleansed. Then, said the angel to John, shall the mystery of God be finished; which is the same thing. [This gospel of the Kingdom.] This he said would be in the days when the seventh angel should begin to

sound; that it would occupy the first years of his sounding. And again John says, when the seventh angel began to sound, the temple of God was open in heaven, and there was seen in His temple the ark of His testament. (Rev. 11:19.) This introduces us into the second apartment of the heavenly sanctuary; but the work in that apartment is the cleansing of the sanctuary, the investigative Judgment, the finishing of the mystery of God, which consequently commenced when the seventh angel began to sound.

The sins being borne from the sanctuary in the type, were laid upon the head of the scape-goat, which was then sent away to perish. This was the shadow of some service in connection with the heavenly sanctuary by which our sins are to be put away, in fact, forever. Upon whom could they more appropriately fall at last than upon the devil, the author and instigator of sin? Satan is the antitypical scape-goat. Azazel, (Lev. 16: 8, margin,) is held on good authority to mean the devil. True, Christ is said to have borne our sins, but that was upon the cross before he commenced his priestly work. He never after bears them except as priest; and the last he does with them is to lay them upon the head of their author, the devil, who is sent away with them to a land not inhabited. The account of this binding of Satan is found in Rev. 20: 1-3. At the end of the thousand years, being loosed out of his prison by the resurrection of the wicked, whom he then again has power to deceive, even to bring them up against the camp of the saints, (Rev. 20: 8, 9,) he is, with them, forever destroyed by fire from God out of Heaven. Then comes the day of execution of judgment, and perdition of ungodly men. (2 Pet. 3: 7.) Sins are then put away forever. Evil is destroyed, root and branch. A new heaven and earth succeed the old. (Verse 13.) The saints enter upon their everlasting inheritance,

and the universal song of jubilee goes up from a holy and happy universe to God and the Lamb. (Rev. 5: 13.)—Synopsis of Present Truth, by U. Smith, Battle Creek, Mich., Pps. 22-28.

In view of statements made by skeptics in regard to the resurrection of the Saviour not having been witnessed by any one, and disbelieved in by the Jews, also some of His own disciples, and those who claimed He had risen, only claimed that He had been seen by some 500 at most, we have concluded to give a chapter on that subject. The foregoing chapter we believe to be from a Scriptural standpoint, and may be read with profit by all Biblical students, whether Catholic or Protestant. By permission of the publishers we give the pamphlet complete for we believe that, to those who will read it, its results and conclusions will be final:—

CHAPTER XI.

Day of the Crucifixion and Resurrection of Christ.

HOW LONG DID CHRIST LIE IN THE GRAVE?

THE questions, on what day was Christ crucified? how long did he lie in the grave? and on what day did he rise from the dead? are questions which naturally invite the interest and study of every Christian student. They are questions which have an intimate relation to other subjects, and upon which it is therefore important that correct views be entertained. It is a cause of regret that sentiments are being advanced upon these points, and seemingly promulgated with especial activity at the present time, which are not only untrue in themselves, but calculated to work immense mischief to the Sabbath cause.

The views to which we refer are: 1. That Christ must lie in the grave seventy-two full hours, because it is said that he was to be "in the heart of the earth three days and three nights;" and 2. That he was consequently buried at the close of the day on Wednesday, and rose at the closing of the day on the Sabbath, or just before the first day of the week commenced.

Against this position we present three indictments:—

1. It is founded on warranted assumption.
2. It is calculated to damage, rather than help the Sabbath cause.
3. It is contrary to the Scriptures.
 1. It is founded on assumption. The text to which appeal is first made is the one solitary declaration found in Matt. 12:40. "For as Jonas was three days and three nights in the

whale's belly; so shall the Son of man be three days and three nights in the heart of the earth." The statement in Jonah, to which allusion is here made, is simply this: "And Jonah was in the belly of the fish three days and three nights." Jonah 1:17.

How does this prove that the Saviour was to lie in the grave for seventy-two hours? "Why," it is answered, "the expression, 'three days and three nights,' means just seventy-two hours, no more, no less; for as one day and one night embrace twenty-four hours, three days and three nights would be three times twenty-four hours, that is, seventy-two hours; and, secondly, the expression, 'the heart of the earth,' where the Saviour was to be three days and three nights, means the grave. Therefore, Christ was to lie in the grave seventy-two hours."

THREE DAYS AND THREE NIGHTS.

In reference to the first part of this answer we inquire, Where is the proof that the expression, "three days and three nights," means just seventy-two hours, and never any less? The response is, "That is what any one would understand by it at the present time." Yes, but what *we* understand by it now, has nothing to do with the matter. The question is: What did *they* understand by it, by whom the New Testament was written? In what sense did they use it? What was the *usus loquendi* of that age? If we can ascertain this, we can tell what meaning we must give the expression in the New Testament, however much the sense in which it is used may have changed between that time and ours.

We easily find testimony to show that the expressions, "three days," "after three days," "three days, night or day," were used by the writers of the Bible as expressions not always signifying a period beginning with the first minute of the first day, and reaching to the last minute of the third; but

taking in only a portion of the first and third, including, of course, the whole of the second. Thus we read in Gen. 42: 17, that Joseph put his brethren in ward *three days*. Here the word "day" is used in its broad sense, covering the dark part as well as the light. It is the same as if it read that he put them in ward three days and three nights; for if we subdivide the day into its light and dark parts, it would take three of each of these parts to make three days, and the expression "three days" must include all these parts. Yet *on the third day*, presumably in the morning of that day, Joseph made a proposition to them, which they accepted, and their sacks were then filled with corn, and they departed on their journey, which would naturally take the greater portion of the light part of that day. Now it must be shown that Jonah and Matthew used the expression respecting the three days in a different sense from that in which the writer of the book of Genesis used it, or it must be admitted that that expression does *not* mean seventy-two full hours.

Again in 1 Kings 12: 5 we have a record of what Jeroboam said to the people, in these words: "Depart yet for three days, then come again to me." This would indicate a definite period of just three days, if we should interpret it with the ultra rigidity of modern critics; but in 2 Chron. 10: 5, the same expression is given as follows: "And he said unto them, 'Come again unto me *after* three days.'" But in both records (1 Kings 12:12, and 2 Chron. 10: 12) it is stated that, in accordance with this arrangement, the people returned *on the third day*: "So Jeroboam and all the people came to Rehoboam *on the third day*, as the king bade, saying, 'Come to me again on the third day.'" "

This testimony shows that the terms, "three days," "after three days," and "on the third day," are used as synonymous

expressions. But a little tract has been used by Elder N. Wardner, entitled, "Prophecy of Christ Concerning His Burial and Resurrection," in which he contends that it is a very loose method of interpretation, to claim that "three days and three nights," mean a period that would terminate on the third day; and he attempts to dispose of such passages as we now have before us by simply remarking, "No nights are named." Indeed! What possible difference can this make? Is not the word "day" here used in its broad sense, including both the light and the dark parts? and would not "three days" include "three" each of such parts? Most assuredly the word is so used; and the expression in each of the instances referred to, is therefore exactly equivalent to "three days and three nights."

In Esth. 4:16, and 5:1, we find an expression still more puzzling to those who deny that it was the custom of Jewish times and the Jewish people, to use the expression "three days and three nights" to signify a period ending on the third day, and not embracing seventy-two full hours. The verses referred to state that Esther requested the Jews to fast with her three days. She said, "Fast ye for me, and neither eat nor drink three days, *night or day*." She added, "I also and my maidens will fast likewise;" that is, three days, night and day. Would this passage be any stronger if it read, "three days and three nights?" Any one can see that this is just the same as saying, "three days and three nights." Mr. W. attempts to dodge this by saying, "But the number of nights are not named [!], and the statement does not require more than two; depending on the time of day they began to fast." But we submit to the candid reader, if the numeral adjective "three" does not cover both members of the distributive clause, as well as one; thus, "three days," then dividing it up into its light and dark parts, "night or day;" how many of such parts would be required

to make the three days? How many light parts—days?—Three. How many dark parts—nights?—Of course the same number, *three*. But Mr. W. would have us read it something after this fashion: “Three days, *night* or *day*, that is, *three* days and—well, let’s see, *two nights*, that’s enough for that.” It may seem to him consistent to wrest the Word of God by arbitrarily changing the term “three” in the first part of the sentence into “two” in one member of the last part; but it does not so appear to us. His conclusion in regard to the passage is, “It is *not* parallel to the statement, ‘*three days and three nights*.’” To make this statement true, the word “not” should be taken out, and the italics transferred to the word “is,” so as to make it read, “It *is* parallel to the statement ‘three days and three nights.’” So after Esther had used the equivalent of the expression, “three days and three nights,” during which they were to fast for her, the record says that on the *third* day Queen Esther went into the presence of the king, and obtained her request.

It will be noticed that Mr. W.’s exposition of this passage destroys his claim on Matt. 12:40; for he admits that three light portions of the day are here distinctly specified, and yet on the *third* one of these divisions, Esther proceeded to the king. So the expression “three days,” does not include the whole of the time embraced in these days, but only the first and second, and a portion of the third. Now if the expression “three days,” applied explicitly to these light divisions, may mean only two and a portion of the third, by parity of reasoning, the expression “three nights,” applied to the dark divisions, may mean only two and a portion of the third; and the expression “three days and three nights” may be used without signifying absolutely seventy-two hours.

There are nine passages that declare that Christ was to

rise "the third day," as Matt. 16:21; 17:23; 20:19, etc.; one that He did rise "the third day" (Acts 10:40), and two that He should rise after "three days." (Matt. 27:63; Mark 8:31.) This frequent reference to the "third day," suggests the question,—

WERE THE DISCIPLES ABLE TO COUNT THREE?

for they have located for us this "third" day. The two disciples on their way to Emmaus after the resurrection of Christ (Luke 24:21), said "To-day is the third day since these things were done." And this day is particularly specified as "the first day of the week." (Verses 1, 13.) Here we have a plain and immovable waymark to guide us in our reckoning; the first day of the week was *the third day*,—a remark evidently brought in here with design to identify the fulfillment of the numerous predictions that He should rise on the third day.

But from what events did they commence their enumeration? How much was embraced in "these things?" Verse 20 answers. After stating what kind of person Jesus of Nazareth was, a prophet mighty in word and deed, they begin the enumeration of the "things" to which they refer. They say, "And how the chief priests and our rulers delivered Him to be condemned to death, and have crucified Him. But we trusted that it had been He which should have redeemed Israel, and besides all this, to-day is the third day since these things were done."

"These things" certainly *include the trial of Christ as well as the crucifixion*; and the first day of the week was the third day since this work commenced. Let us then count back and find the beginning. If the first day of the week was the *third* day since these things were done, the day preceding, or Sabbath, was the *second*, and the day before that, or Friday, was the *first*. But if, on account of the word "since," any

say that we must go back further still, we can go back only another day, which would carry us to Thursday; and this is as far as it is possible to go; and that too, for the trial of Christ, and not merely for His crucifixion.

This circumstance and this positive declaration of the disciples, evidently staggers Mr. Wardner in his argument. He meets it by saying: "Is it proper to make an incidental remark of an *uninspired* man, outweigh and set aside a carefully written statement of an *inspired* penman?" This raises again our question, "Were the disciples able to count three?" We do not imagine it would require a great deal of "*inspiration*" to enable the disciples, under their circumstances, to keep the count, of three or four days at least, after the crucifixion; and we believe they stated it with exact correctness, and Christ did not accuse them of wrong reckoning. No inspired writer, as we shall see, has prepared any carefully written statement which contradicts this.

Not quite satisfied to leave it on that ground, Mr. W. hunts around to find some "prominent item" from which they might have reckoned, and fixes upon the setting of the watch at the sepulcher, as the great desideratum. He says: "Hence the setting of that watch would naturally be a prominent item among '*all these things*' that they were talking over; and this was the third day after it"!!

How much weight this is entitled to, may be estimated by reading again the words of the disciples to Christ, who say *not one word* about the setting of the watch, but dwell upon the trial and the crucifixion. A position which drives its adherents to such make-shifts as to try to discredit the statement of the disciples because they were not *inspired* (as if they could not keep track of time for three days), and then set up an artificial starting-point from which to reckon, of which the dis-

ciples make no mention whatever, sufficiently betrays its inherent weakness.

We have two notable instances which show us how both Christ and the apostles reckoned "the third day." When it was feared that Herod was plotting the destruction of Jesus, and He was desired to depart out of Herod's jurisdiction, He made reply: "Go ye, and tell that fox, Behold, I cast out devils, and I do cures to-day and to-morrow, and the third day I shall be perfected." (Luke 13: 32.) Here the day then current when the conversation was held, though a portion of it had of course passed, was counted as *one*, the morrow as *two*, and the third day after the morrow, as *three*.

Again in Acts 27: 18, 19, Paul, in giving an account of his shipwreck, says: "And we being exceedingly tossed with a tempest, the next day they lightened the ship; and the third day we cast out with our own hands the tackling of the ship." Here, also, the day on which the event first mentioned occurred, is reckoned as the first, the day following as the second, and the next the third.

Applying the same rule to the time of Christ's death and resurrection, we have the day on which the events first spoken of occurred, the trial and crucifixion of Christ, as the first day of the series; the day which He passed in the tomb as the second day; and the day on which He arose and appeared to His disciples, the third day. And such a period the people of that time were accustomed to speak of as "three days," "after three days," "the third day," "three days, night or day," "three days and three nights," as is clearly shown by the passages already referred to. Elder W. may, if he chooses, call the method by which Christ and His apostles reckoned time, "loose interpretations." We do not so regard it. But whether

it was not, our duty is to follow the same rule when interpreting their words.

A portion of our first proposition (namely, that the view that Christ was crucified on Wednesday and arose on the Sabbath, rests on assumption) is now proved. The claim that the expression, "three days and three nights," means just seventy-two hours, no more, no less, is an assumption. It cannot be proved. All the evidence goes to show that it means, or at least may mean, a less period than that; for the use of equivalent expressions in the Scriptures, demonstrates that it was the custom of Bible writers to use the phrase "three days and three nights" to signify a period less than seventy-two hours; and the fact that they so used it, utterly destroys it as proof that Christ must lie in the tomb just seventy-two hours.

The other leg of the seventy-two hour theory, namely, that the expression, "heart of the earth," means the grave, is an equally unwarranted assumption. If it does not mean that, then the structure built upon their main proof text (Matt. 12:40) suffers an utter collapse. If "three days and three nights" do not mean seventy-two hours, as we have shown that they do not, and "heart of the earth" does not mean the grave, as we will show that it does not, what ground is left for the seventy-two hour theory?—None at all. But we ask, Where is the proof that "heart of the earth" means "grave"? We have, time and again, called for proof on this point, but have never yet succeeded in securing any response. We have carefully searched through a dozen arguments on that side of the question, and not the first attempt do we find to prove that "heart of the earth" means the "grave." The quiet assurance with which all these writers take this point for granted, the imperturbable indifference and obliviousness with which they pass it by, is astonishing. What can be said to

awaken in their minds the idea that here is a point that must be *proved*, before their theory will stand?

The expression "the heart of the earth," has no more reference to the grave, than it has to the moon.

The word "heart" primarily means the organ by which the circulation of the blood is kept up in the body. Of course it is not here used in that sense; nor is it used in its secondary sense of the "seat of the affections;" nor yet in its third meaning, as "the part nearest the center," as the "heart of a tree," the "heart of a country," etc.; for Christ was not buried in the center of the earth. Evidently the sense in which it is used is a figurative one; but what is there about the grave to make such a figure appropriate, as applied to it?—Nothing whatever. But if the heart of the earth does not mean the grave, then, even if three days and three nights mean absolutely seventy-two hours, it is not proved that Christ was to lie in the tomb that length of time. These are the two main pillars of the seventy-two hour theory; and both of these are assumptions.

That this view has been adopted by the few who entertain it, with a good motive, we have no question. It has seemed to them a masterly stroke of policy to destroy the Sunday error at one blow. They say, "If the principal and fundamental premise of Sunday-keepers—'Jesus rose on Sunday'—appears uncertain, or is false, then all arguments, premises and conclusions of Sunday advocates are ruined at once. It supersedes the necessity, on our part, of following them through all their arguments of assumption, etc., and compels them to acknowledge that the weapon they hold in their hand is only an illusion."

This would be true only on one condition, and that is, that the Sunday-keeper would *acknowledge that the position of*

the Sabbath-keeper was correct, that Christ did not rise on Sunday. But this is just what *he will not do* and what the Sabbath-keeper *cannot prove*. Then, what advantage is gained?

Let us imagine an attempt to meet a Sunday-keeper on this ground. The Sunday-keeper says, "I keep Sunday because the Lord arose from the dead on that day." The Sabbath-keeper replies that he is wrong to keep it for that reason, because Christ did not arise from the dead on that day. He must have arisen the evening before the first day; for He was put in the tomb near the close of some day, and was to remain in the heart of the earth three days and three nights, just seventy-two hours, hence His resurrection must have taken place at about the close of the Sabbath, and not on Sunday at all. And His crucifixion was on the preceding Wednesday. The Sunday-keeper asks him to prove that the phrase "three days and three nights" means just seventy-two hours, confining the resurrection to the close of the day; and that the "heart of the earth" means the "grave."

By raising these questions, the point of the controversy is at once shifted from the Sabbath question proper to that of the time of Christ's resurrection. And giving it such a turn is a virtual confession that the resurrection of Christ has a decisive bearing on the question as to which day is the Sabbath; but this is wholly untrue; it has no bearing on the Sabbath question whatever; the Sabbath-keeper takes upon himself propositions which it is impossible for him to prove, and the vantage ground every way is given to the Sunday-keeper. Such is the position a person puts himself in, who undertakes to work the Sunday question on this line of argument. The Sunday-keeper retires from the field triumphant, confirmed in his conviction that the resurrection of Christ determines the day of the Sabbath, and that that day is Sunday. It must,

therefore, inevitably prove a damage, rather than a help, to the Sabbath cause. This is the second indictment we hold against this view.

We believe it is acknowledged to be a sound principle in all discussions, to go as far as possible with an opponent, reducing the issue to as small a compass and as few particulars as practicable; for in this way can questions be the soonest and most satisfactorily settled. But the seventy-two-hour theory enlarges, rather than contracts, the field of discussion, and that, too, on an issue for which there is no foundation whatever. When the Sunday-keeper claims the first-day institution on the fact of Christ's resurrection upon that day, grant him his supposed fact, even if only for the sake of the argument; and then show him that though this was the case, it has not the remotest bearing on the question of which day is the Sabbath, and affords no ground whatever for the observance of the first day of the week. And this can be done *a thousandfold more easily* than the average Sunday-keeper can be convinced that Christ did not rise on the first day of the week, and the desired object would be as fully gained by this method as by the other. Under these circumstances, why take the impossible side?

Before proceeding to the direct testimony of the Scriptures on the subject before us, a few thoughts concerning that peculiar phrase, "the heart of the earth," will be in order. We have already noticed some things to which it cannot refer. Let us now consider what it may mean. It is here to be carefully borne in mind that the comparison is between the experience of Jonah and that of Christ. Jonah was for a time in a condition that illustrated a condition which Christ would for a time be in. And what part of Jonah's experience is taken?—The time when he was inside the great fish by which he was swallowed. His condition then represented Christ "in the

heart of the earth." The point of inquiry then is, What, in Jonah's case, corresponded to "the heart of the earth" in Christ's case? The answer is, The living fish which had *actively taken Jonah into its own power*, and under whose control he was till he was cast forth upon the dry land. Jonah was not in the bottom of the sea, nor laid in some submarine cavern, nor in dead earth anywhere, but was in a living monster which bore him whithersoever he would. So when Christ was in a corresponding condition "in the heart of the earth," we must look for Him not merely in the embrace of the lifeless grave, the inert tomb, but under the dominion of some living power. We must not do violence to the comparison; the living fish is no fit symbol of the grave. But it will be asked, Does not Christ refer to the time He would be in the grave? That time is of course included; but that is not the condition to which He specially referred. He was not in the heart of the earth because He was in the grave; but He was in the grave incidentally, because He was in the heart of the earth; that is, He was under the control of a power which put Him in the grave—a power corresponding to the living fish which swallowed Jonah.

It will be conceded by all that the expression "the heart of the earth," is a figurative one, because there is no literal sense in which the application can be made. Now, taken figuratively, in what sense is the word "earth" most frequently used in the Scriptures?—It is used in such a sense to represent the inhabitants of the earth. It is so used in Rev. 12:16: "And the earth helped the woman;" also in Isa. 1:2: "Give ear, O earth;" and in Jer. 22:29: "O earth, earth, earth, hear the word of the Lord." Here the word is used to denote the wicked inhabitants of the earth. Satan is the god of the world, the head of its prevailing multitudes, who constitute the children of the

wicked one. Into the hands of these the Son of man was to be for a time delivered. Christ often makes a special point of this: "The Son of man shall be betrayed into the hands of men." (Matt. 17:22.) "The Son of man is betrayed into the hands of sinners." (Matt. 26:45.) And this is what we understand He meant by declaring that He should be "in the heart of the earth;" that is, under the full control and power of wicked men and devils, so that they could accomplish the evil desires of their hearts concerning Him. And when He was thus delivered over to them, He declared plainly, "*This is your hour, and the power of darkness.*" Luke 22:53.

In nine instances where it is declared that He will rise on the third day, the betrayal, trial, and crucifixion are specified as included in the events to occur during the three days; and from the first of these, and not from the burial, the period is to be reckoned. Thus:

Matt. 16:21: "From that time forth began Jesus to show unto His disciples, how that He must go unto Jerusalem, and suffer many things of the elders and chief priests and scribes, and be killed, and be raised again the third day."

Matt. 17:22, 23: "The Son of man shall be betrayed into the hands of men: and they shall kill Him, and the third day He shall be raised again."

Matt. 20:18, 19: "The Son of man shall be betrayed unto the chief priests and unto the scribes, and they shall condemn Him to death, and shall deliver Him to the Gentiles to mock and to scourge, and to crucify Him: and the third day He shall rise again."

Mark 9:31: "The Son of man is delivered into the hands of men, and they shall kill Him; and after that He is killed, He shall rise the third day."

Mark 10:33, 34: The Son of man shall be delivered unto the chief priests, and unto the scribes; and they shall condemn Him to death, and shall deliver Him to the Gentiles: and they

shall mock Him, and shall scourge Him, and shall spit upon Him, and shall kill Him; and the third day He shall rise again."

Luke 18: 32, 33: "For He shall be delivered unto the Gentiles, and shall be mocked, and spitefully entreated, and spitted on; and they shall scourge Him and put Him to death; and the third day He shall rise again."

Luke 24: 7: "The Son of man must be delivered into the hands of sinful men, and be crucified, and the third day rise again."

Luke 24: 20, 21: "And how the chief priests and our rulers delivered Him to be condemned to death, and have crucified Him. But we trusted it had been He which should have redeemed Israel: and besides all this, to-day is the third day since these things were done."

Luke 24: 46: "Thus it behooved Christ to suffer, and to rise from the dead the third day."

In all these scriptures it will be noticed that His being given over into the "hands of men," "the hands of the Gentiles," "and the hands of sinners," is made equally prominent with the other events; and the trial and condemnation and crucifixion are inseparably connected with the resurrection, as coming within the three days. During all this time He was "in the heart of the earth"—that is, under the dominion of sinful men. This idea corresponds much better with the case of Jonah. He was in the stomach of the fish, under the control of a *living* monster, not buried in dead earth; so Christ was under the domination of living men and devils. He was no more in the heart of the earth when in the grave, than He was when hanging on the cross; no more in the heart of the earth when in the tomb, than He was when the mob had secured actual control over Him, after His betrayal by Judas.

Reckoning from this standpoint, how much time have we? Near the close of the day on Thursday He prepared to

eat the passover with His disciples. The evening following (Thursday night as we would now call it; Friday, or sixth day, night as it was then), Judas and his mob came out with torches, and swords, and staves, and He was betrayed into their hands. All that night and the next day till the third hour, was occupied with the trial; from the third to the ninth hour, with the crucifixion. From about the ninth hour to the beginning of the seventh day, the burial was attended to. All that night, the day following, and the succeeding night were passed by Him in the tomb. Early on the morning of the first day of the week, He arose. This gives us three full nights, two full days, and a portion of the third day, making it strictly true that *on the third day* He arose. The following diagram will illustrate these points:

Christ Delivered into the Hands of Wicked Men.

“YOUR HOUR AND THE POWER OF DARKNESS.”

Friday, 1st of the 3 days.				Saturday, 2d of the 3 days.		Sunday, 3d of the 3 days.	
NIGHT.		DAY		NIGHT.	DAY.	NIGHT.	DAY.
1	2	3	4	5		6	
6th Day of Week.				7th Day of Week		1st Day of Week.	

EXPLANATION.—First, The figure “1” marks the betrayal, near the beginning of the sixth day of the week. Second, The figure “2” marks the trial, to the third hour of the daylight part of the same day. Third, The figure “3” marks the crucifixion, from the third to the ninth hour of the sixth day. Fourth, The figure “4” marks the burial, between the ninth hour and the close of day. Fifth, The figure “5” marks the rest in the tomb during the night and day of the seventh day, and the night of the first day. Sixth, The figure “6” marks the resurrection, early the first day of the week. Mark 16:9.

When Christ said to the chief priests and captains of the temple, who had come out to take Him, “THIS IS YOUR HOUR AND THE POWER OF DARKNESS” (Luke 22: 52, 53), He set apart a peculiar period in His experience during which He was in the hands of men. This was the time when He was “in the heart

of the earth." It began with His betrayal, at the beginning of the sixth day, and ended with the resurrection on the morning of the first day of the week. Thus it will be seen that all was in strict accordance with the Jewish manner of reckoning time, as in Gen. 42: 17, 18; 2 Chron. 10: 5, 12; Esther 4: 16; 5: 1; and with the manner in which both Christ and Paul reckoned the third day (Luke 13: 31, 32; Acts 27: 18, 19); and with Christ's repeated declarations that *on* the third day after His betrayal into the hands of men, followed by His suffering and death, He would rise again.

It has been shown, in opposition to the seventy-two-hour theory, that the expression "three days and three nights" does not necessarily mean seventy-two hours, and that the expression, "the heart of the earth," does not mean the grave. The principal proof text, therefore (Matt. 12: 40), which is relied upon to prove that Christ was crucified Wednesday and rose on the Sabbath, utterly fails, in every way, to sustain that proposition.

It has also been shown that as the expression, "the heart of the earth," is used in that text in a figurative sense, the most natural application is to consider it as simply denoting the dominion of wicked men, to which Christ was for a time subjected, beginning with His betrayal, Thursday evening, and ending with that auspicious hour when the guards who were watching Him in the tomb, were struck to the earth as dead men by the power of His resurrection, on the morning of the first day of the week.

The time covered by this application reaches to the middle of the third day (using the word "day" here in its broadest sense) from the time these things began to transpire; or, dividing the time into its dark and light parts, it gives us two full days and three full nights, to the growing dawn of the

third day, answering completely to the manner in which the Hebrews reckoned time, according to the examples given us in the Scriptures. See again the foregoing diagram.

It now remains to look at the direct testimony of the evangelists upon these points.

It is claimed that Matt. 28: 1 positively affirms that Christ rose on the Sabbath. The common version reads: "In the end of the Sabbath, as it began to dawn toward the first day of the week." The Greek reads, "*Ospe de sabbaton te epiphoskouse eis mian sabbaton.*" The Revised Version reads, "Now, late on the Sabbath day, as it began to dawn toward the first day of the week." The subsequent narrative states that Mary Magdalene and the other Mary, coming at this time to the sepulcher, found that the Lord had arisen; and if this visit was made before the close of the Sabbath, of course the resurrection of Christ occurred upon that day.

The argument on this point is made to turn on the little Greek word "*opse.*" This, it is claimed, always means "late," and never "after," hence the passage cannot mean "after the Sabbath." Thus Mr. Wardner, in his tract to which reference has been made (p. 7), says:

"Matt. 28:1 says: 'Late on the Sabbath day He was risen.' Here the Greek '*opse*' is used to represent the closing moments of the Sabbath. It literally means 'late,' and when used with '*hemera*' (day), means late in the day. See Liddell and Scott. '*Opse*' is invariably used in Scripture to represent '*evening*,' and '*proi*' to represent '*morning*,' and they are never used interchangeably."

He then refers, in proof of this last statement, to Mark 11: 19, 20; 13: 35; and to the Septuagint of Gen. 24: 11; Ex. 30, 7, 8, and Isa. 5: 11. But in these references he seems to have overlooked the fact that in all these instances the construction

in which the word is used is not like that in Matt. 28: 1; and he has thus attempted the unscholarly feat of determining the meaning of "*opse*," in one construction, by its definition in another and altogether different construction. Matt. 28: 1 is peculiar; the word is there used with the genitive case, and no other instance of the kind occurs in the New Testament. Mr. W. notices this and says: "'*Opse*' with a substantive in the genitive case, as in Matt. 28: 1, always means late in the period spoken of, and never means '*after!*'"

For so sweeping a statement, this is very positive, and ought to have been backed up by competent evidence other than the bare assertion of the affirmant. Let us see what others have to say upon this point.

Robinson, in his Greek lexicon of the New Testament, gives the following as the definition of the word "*opse*" when used with a genitive:

"2. With a genitive, *i. q.*, *at the end of, at the close of, after.* (Matt. 28: 1,) *opse de sabbaton*, . . . at the end of the Sabbath, *i. e.*, after the Sabbath, the Sabbath being now ended, *i. q.*, (Mark 16: 1, (*diagenomenou tou sabbaton*. For the genitive, see Buttm., §132, 5. b.)"

In his note on Matt. 28: 1, Dr. Clarke says:

"[In the end of the Sabbath] *opse de sabbaton*. After the end of the week; this is the translation given by several eminent critics; and in this way the word "*opse*" is used by the most eminent Greek writers. (Thucydides, lib. 4, chap. 93,) *tes hemeras opse en*—the day was ended. Plutarch, *opse ton basileos chronon*—after the times of the kings. Philostratus, *opse ton Troikon*—after the Trojan war. See Rosenmuller.

Bloomfield's Greek Testament, on Matt. 28: 1, says:

"*Opse de Sabb.*] This must, with Krebs, Wahl, Tittm., Kuin., and Fritz, be explained, 'after the Sabbath,' *i. e.*, as Mark

more clearly expresses it, *diagenomenou tou sabbatou* (the Sabbath being passed) which must determine the sense here. Of this signification the commentators adduce examples from Philostratus, Plutarch, Ælian, and Xenophon."

Olshausen on Matt. 28: 1 says:

"As respects first the fixing of dates, the expression '*diagenomenou tou sabbatou*' in (Mark 16: 1) serves to explain the *opse sabbaton* in Matthew. For instance, *sabbaton*=(Heb.) *shabbath*, also in the plural (*ta sabbata*), was used for the one day of Sabbath. (Compare the Septuagint version of Ex. 20: 10, and Lev. 23: 32.) '*Opse*' is, however, used in the sense of '*after*.' It occurs, indeed, in the New Testament only here; but it occurs also in this signification in profane writers. (Compare Philostratus, Vit. Apoll. 4 18,) *opse musterion* '*after* the mysteries.' Thucyd. 4, 93. Ælian V. H. 2, 23."

These authorities will speak particularly of the use of "*opse*" with a genitive, as in Matt. 28: 1; and they say that in such constructions it has the meaning of "at the close of, *after*;" and they refer to the works of old standard Greek writers, as Philostratus, Plutarch, Ælian, and Xenophon, as evidence that the word can be used in such a sense. In view of these facts, what becomes of Mr. W.'s assertion that "*opse*," with a substantive in the genitive case, as in Matt. 28: 1, always means late in the period spoken of, and never means "*after*"? Does he know better how the Greek language should be used than did Plutarch or Xenophon?

But it may be said that Liddell and Scott do not give this definition to the word; and we may add, neither do the lexicons of Donnegan and Parkhurst. But they do not say that it cannot have this meaning; and the only inference is that in giving their definitions, they did not make them broad enough to cover all the uses of the word as it actually appears in Greek writers. Greenfield and Bagster both define "*opse sabbaton*," after the close of the Sabbath. Matt. 28: 1."

Another word in the sentence confirms the view that it applies to a time when the Sabbath was passed. That word is "*epiphoskouse*," from "*epiphosko*," translated, "as it began to dawn." The root of this word is "*phos*," which means "light." The light of the sun and the light of the day, is, of course, the leading idea contained in the word. The verb "*epiphosko*," signifies the transition from darkness to daylight. It applies, primarily, therefore, to the morning. Liddell and Scott give it this one definition, "to grow toward daylight." Other lexicographers, in addition to this, give it a tropical meaning, signifying the "commencement" of the day, at whatever time that might be reckoned. The Jews reckoned the day as beginning at sunset. Hence the word is once applied to the day so beginning, as in Luke 23: 54: "The Sabbath *drew on*." And this text and Matt. 28: 1, are the only instances where the word is used in the New Testament.

Its use in Luke 23: 54, to denote the coming on of the Sabbath, which began at sunset, is easily accounted for. As the word "day" is ordinarily applied to the light part of the twenty-four hours, and as the word "*epiphosko*" signifies the commencement, or opening of that part, it would naturally come to be used, under a figurative meaning, of the commencement of the day in its broader sense, whether that day began at sunset, as with the Jews, or at midnight, as with the Romans. But of course the primary sense should be given it wherever possible. The seventy-two-hour theorists think they have a straight reading when they render "*opse*" "late," and read it, "Late on the Sabbath, as the first day drew on." But we take our stand a few hours later, translate "*opse*" "after," as it means when used, as here, with the genitive, and give "*epiphoskouse*" its *primary* signification; and then we have, "*After the Sabbath, as it began to grow toward daylight on the first day*"

of the week." This is a less forced reading than the other, and agrees with Greek usage and with the records of the other evangelists, as we shall see.

The reader did not fail to notice the testimony of Robinson, Bloomfield, and Olshausen; that the testimony of Mark 16: 1 is parallel with that of Matt. 28: 1; and that the explicit and definite statement given by Mark must determine the sense of the passage in Matthew. But Mark says directly:

"And when the Sabbath *was past*, Mary Magdalene and Mary the mother of James, and Salome, had bought sweet spices, that they might come and anoint Him. And very early in the morning, the first day of the week, they came unto the sepulcher at the rising of the sun."

Our friends endeavor to get over this passage by claiming that the visit to the sepulcher recorded by Matthew was not the same as the one here recorded by Mark. Matthew, they say, speaks of a visit at the close of the Sabbath, and Mark of a visit the next morning, the first day of the week. But all are obliged to admit that the same individuals are spoken of in both records. Thus Matthew says that Mary Magdalene and the other Mary came to see the sepulcher.

"And, behold, there was [margin, *had been*] a great earthquake; for the angel of the Lord descended from heaven, and came and rolled back the stone from the door, and sat upon it."

Mark says that Mary Magdalene, and Mary the mother of James (the same Marys that Matthew speaks of), and Salome, came early on the first day of the week, and, intending to anoint Him, queried among themselves who should roll the stone away from the door of the sepulcher for them. Now, if this was a subsequent visit to that recorded in Matthew, we have a tremendous absurdity to wrestle with: we have to ex-

plain how the two Marys could go to the sepulcher before the close of the Sabbath, late Sabbath afternoon, in broad daylight, find the stone rolled away and the sepulcher empty, meet an angel who expressly says to them, He is not here; for He has risen, and tells them to go and make it known to the disciples; and then as they return, meet Jesus, receive His welcome, All hail! and hold Him by the feet and worship Him; and then, after passing through this thrilling experience, go back stupidly to the sepulcher the next morning, expecting to find Jesus there, and to enbalm His body, and wondering who would roll the stone away for them!

Mr. Wardner endeavors to surmount this difficulty in the following unique style. After referring to the unbelief of the disciples in regard to the resurrection of Christ, he says:

“Now if the combined testimony of Peter and John and the two brethren who went to Emmaus and the personal demonstrations of Christ Himself in their presence, could not convince those apostles that what they themselves saw and handled was anything but a spirit, until Christ ate before them, is it strange that Mary Magdalene should, by them, be made to doubt the literal reality of what she saw and heard on her first visit to the tomb? She probably had no more idea that He was to rise from the dead than they had, and was as much inclined to believe in spirit manifestations and visions as they; and when they all united in scouting the reality of what she had reported, and insisted that it was simply a vision, she would naturally doubt her own senses, as they doubted theirs, and hence her visit to the tomb, the next morning, while yet dark (John 20: 1), to satisfy herself whether or not it was a reality.”

Now we submit that this explanation is a little hard on those good women. If some of the brethren were “fools, and slow of heart to believe,” it is no reason why the same state of mind should be charged upon the sisters. And there is not a hint in all the record that *any of the women ever dis-*

believed, after they had seen Him, or the fact of his resurrection had been announced to them. Neither did the brethren disbelieve after they had seen Him. It was only before they had had a chance to settle the question by the evidence of their own senses, that they doubted; but when they had seen Him (as it is claimed the Marys saw Him at the close of the Sabbath), that settled the matter, and they were then ready to exclaim, "The Lord is risen, indeed!" (Luke 24:34.) There is only one text which has any semblance of opposition to this view; and that is Luke 24:41: "And while they yet believed not for joy." But this does not imply any settled unbelief, but only that they felt that what they saw before them, was, as we sometimes express it at the present time, "too good to be true." Under these circumstances, to represent Mary Magdalene as being reasoned out of her own senses, or as being persauded to believe that God (or the devil?—which?) had given her a spirit manifestation, setting forth what was not true; and on the strength of it, she had been telling the brethren a lie, that the Lord was risen when He was not — it is too preposterous for a moment's credence.

Two other absurdities are involved in the view that the narrative of Matthew 28, antedates that of the other evangelists, he recording what took place at the close of the Sabbath, and they, what occurred the following morning. These absurdities are:

1. When Jesus arose, some of the watch immediately hastened to the chief priests, and told them what had occurred. (Matt. 28:11.) The priests advised them to account for the absence of Jesus from the tomb (first discovered at the close of the day Sabbath, remember) by saying that the disciples came by night, and stole Him away while they slept. (Verse 13.) "Came *by night*." That must have been, then, the night be-

fore, and they were then asleep, and hadn't waked up enough to discover that the body was gone till the close of the following day! No wonder they were afraid their heads would come off over such a story! A position involving the narrative in such an absurdity will never answer.

2. According to this position, the two Marys (of whom Mary Magdalene was one) met the risen Saviour at the close of the Sabbath, and held Him by the feet and worshiped Him. (Matt. 28: 9.) But Mary Magdalene, according to John (20:1-17), met the Saviour on the morning of the first day of the week; and as she was about to worship Him, He said to her, "Touch me not, for I am not yet ascended to my Father." Now it is absurd to suppose that He would permit her, at the close of the Sabbath (as it is claimed that Matthew declares), to hold Him by the feet and worship Him; and yet the next morning, as John testifies, refuse to permit her to touch Him, because He had not yet ascended to His Father.

The language employed by Matthew in verse 1, is entirely in harmony with the idea that the Sabbath was fully past when the events which he records took place, and some, at least, of the circumstances were such that it is utterly absurd to suppose they could have transpired before the close of the Sabbath.

But it is said that Matthew's record does not agree with that of the other evangelists, in that he states a number of particulars which they do not mention; and therefore he must refer to a different visit to the sepulcher, from the ones which the others record.

But this does not by any means follow. Several witnesses may describe the same scene, and neither of them record what the others mention; yet, it cannot be said that there is any discrepancy or disagreement between them, unless what one says would make it impossible that what the others say could be

true. And this is recognized as a legitimate principle harmonizing the records of the evangelists. One writer may state particulars not mentioned by another; but that does not discredit his own testimony, nor prove the other untrue. Thus Matthew (chap. 28: 1) says that the two Marys came to the sepulcher. Mark (chap. 16: 1) says that Salome was with them. But the fact that Matthew did not see fit to mention her name, does not prove that she could not have been there at the time that he speaks of, and therefore does not prove that Matthew must have referred to a different occasion from that recorded by Mark. So Matthew speaks of the earthquake which had taken place before the Marys reached the sepulcher, the descent of the angel, the prostration of the soldiers who were guarding the tomb, their report to the priests, and the story which the latter invented to try to cover up the truth. But there is nothing in the records of the other evangelists to show that any or all these things might not have happened in close connection with what they relate, they simply choosing to dwell upon other particulars. Nothing further need be said on this point.

We now come to what we offer as positive testimony that Christ did rise upon the first day of the week. It is the testimony of Mark 16: 9:

"Now when Jesus was risen early on the first day of the week, He appeared first to Mary Magdalene, out of whom He had cast seven devils."

On this point Mr. Wardner remarks:

"Mark (16: 9) is quoted to prove that Christ rose on first-day morning; but he says no such thing. He says that Christ '*was risen*' at that time, without intimating when He rose."

We suppose he is aware that the word "risen" is simply the second aorist participle, and would be properly rendered

"Now Jesus *having risen*," instead of "Now when Jesus *was risen*." His position here reminds us of that of the Sunday Sabbatarian on Acts 20: 7. That text reads, "And upon the first day of the week *when* the disciples came together to break bread," etc. Here, says the Sunday-keeper, the expression, "*when* they came together," denotes repeated and customary action. But, we reply, the Greek has simply the noun and its participle—"the disciples have come together"—denoting only an incidental meeting.

The construction of Mark 16: 9 is similar; and if we read it, "Now Jesus having risen early the first day of the week," there would hardly seem to be any room to question the meaning of the passage. Such is the reading; and such *we believe* to be the plain intent of the passage; namely, to declare explicitly that Jesus rose on the first day of the week; and no criticism that we have yet seen seems sufficient to overthrow it. Meyer, to be sure, endeavors to throw the passage away by making it apocryphal. He argues that the latter part of Mark 16, beginning with verse 9, is an interpolation by some other person, and was not written by Mark. But this is sufficiently refuted by Lange, on the authority of the great majority of eminent critics, who consider this portion of Mark's Gospel as genuine as any other part of it.

In regard to the construction of verse 9, Meyer declares that it is impossible to tell whether the adverb "*proi*" (early) qualifies the participle "*anastas*" (having risen) or the verb "*ephane*" (appeared) as found in the sentence, "he *appeared* first to Mary Magdalene." This being so, and the construction admitting of *either* application, we are thrown back upon the *sense* of the whole passage to determine which it is. The adverb certainly qualifies one of those words, and it does not qualify them both. We must give it that application which

will make the apostle's statement most consistent and reasonable; and that will be the correct one.

We have, then, before us on this point, two positions: one class hold that the adverb qualifies "appeared;" and they would read the passage thus: "Now when Jesus was risen [some time in the past], He appeared early the first day of the week to Mary Magdalene first." This is the position of those who deny that Christ rose on the first day of the week. Thus Mr. Wardner says:

"Mark's statement is explained by what John says (chap. 20: 1-18), who describes a second visit of Mary Magdalene in the morning while yet dark, to whom Christ again appeared, before He did to anyone else that day."

The other position is that the adverb "early" qualifies the participle "having risen;" and those who hold this view would read the passage substantially as it is in our common version. "Now, Jesus having risen early the first day of the week, He appeared first to Mary Magdalene;" not merely first on that early portion of the first day of the week, but first after His resurrection; that is, He rose early on the first day of the week, and first showed Himself, after His resurrection, to Mary Magdalene.

Now which of these is the more consistent view? The answer to this question we are willing to leave to the candid judgment of any reader who will give the subject a little careful thought. We can easily see that some importance attaches to the fact of Christ's first appearance, and that there is some reason why it should be expressly revealed to whom He first appeared. But where is there the least shadow of reason for stating to whom He appeared first on some particular portion of the day, as the early part of the first day of the week, especially since it is claimed that He had already appeared to the

same party the evening before ! If it is so important a matter to tell to whom He appeared first, on the different divisions of the day, why does not the record state to whom He appeared first at the third or sixth or ninth hours of the day ? It would be just as important to know these facts as the one which, it is claimed, is so particularly revealed.

We are referred to John 20, in explanation of Mark 16:9. But let us see how John's record will compare with the interpretation given to Matthew 28, by the seventy-two-hour theorists. John says that Mary Magdalene came early the first day of the week to the sepulcher, and saw the stone taken away. She hastened back to Peter and John, and said unto them, " They have taken the Lord away out of the sepulcher, and we know not where they have laid Him." This is evidently the first intimation that Peter and John or any of the disciples had had of the matter. So Peter and John ran to the sepulcher. But she, it is claimed, had been to the sepulcher the night before (according to Matthew's account), and found the stone rolled away, and had seen an angel, who told her plainly that the Lord had risen, and then had met Jesus Himself and recognized Him, and held Him by the feet and *worshiped Him*, knowing of course that He was the Lord ; and yet, going to the sepulcher the next morning, and seeing the stone taken away, she runs and reports that someone has stolen the Lord out of the sepulcher, and she does not know where they have laid Him ! Mr. Wardner claims, as before noticed, that Mary Magdalene went to the sepulcher on first-day morning, expecting to find Christ there, because the disciples had reasoned her out of her own senses respecting her visit to the sepulcher and her interview with the angel and Christ the night before. But it appears from this record in John that she, strangely, had said not a word to the disciples about the wonderful scenes of

the night before; and the first announcement she made to them was, when she saw the stone taken away the next morning, that some one had stolen the Lord out of the sepulcher! So she had not been reasoned with at all on the subject, and we must attribute her singular conduct to her own obliviousness. Strange that she should have forgotten that she had seen the stone rolled away the night before; had seen and talked with an angel; had met the Saviour and held Him by the feet and worshiped Him! If this is so, although Christ had cast seven devils out of her, there was still another left—a remarkable imp of forgetfulness! But we will not defame the fair memory of the devoted Mary, by any such unsupposable supposition.

The record in John 20, does indeed agree with Mark 16:9. It shows that Mary Magdalene had not seen Him before the first day of the week, and that she was the first one who did see Him; and at that first revelation He could permit no one to touch Him, because He had not then ascended to His Father. But in His then resumed, exalted, immortal nature, He could go and return more quickly than the angels, whose movements seemed to the prophet like a flash of lightning (Eze. 1:14); and we may suppose that He ascended to His Father, to receive His approval of His sacrifice, and was almost immediately again present on earth to receive the worship of the women (Matt. 28:9), who could now approach Him freely, to show Himself to all the other disciples, and to talk to them more fully “of the things pertaining to the kingdom of God.” (Acts 1:3.) And as we go back in imagination to that first-day morning, and consider what a morning it was to them of multiplying wonders, and joyful surprises; how they must have gone many times back and forth, singly and in groups, to the sepulcher, and iterated and reiterated to each other the wonderful tale, while they could scarcely believe their own senses,—it is easy

to account for all the evangelists have written, and find a place for all which they have individually and collectively described, and even more. And it is certain that Mark declares that the rising of Jesus from the tomb was early on the first day of the week. Any other construction spoils the sense of the narrative.

A few other statements demand a word of notice in this connection. John, in chapter 19:31, says: "The Jews, therefore, because it was the preparation, that the bodies should not remain upon the cross on the Sabbath day (for that Sabbath day was an high day), besought Pilate that their legs might be broken, and that they might be taken away." [The Solar, Lunar, and Passover Sabbaths would come together once in seventy-seven years, and according to the cycles of weeks and Lunar time that was observed by the Hebrews, the time had arrived for this celebration of their threefold Sabbath.]

From this we learn that the day following that upon which the Saviour died, was a Sabbath, and an "high day," or great day (Gr. *megale hemera*). Those who place the crucifixion of Christ on Wednesday, have this Sabbath come on Thursday, and consist exclusively of the passover Sabbath. But there was nothing connected with any passover sabbath alone, to entitle it to that designation. Among the annual sabbaths, the day of atonement was the leading day, not the passover. But if the passover sabbath and the weekly Sabbath then came together on the same day, that fact would bring all the ceremonies of the passover sabbath, and the extra sacrifices and services of the weekly Sabbath together, and make the day a great day. On no other supposition than that they did thus come together at this time, can that expression be accounted for. This would make Friday to be the day of crucifixion, and the day following, that is, the weekly Sabbath, to be the passover sabbath also.

The day of the crucifixion is in several instances called the day of "the preparation," and generally the "preparation of the Sabbath," (Luke 23: 54.) "And that day was the preparation, and the Sabbath drew on." The women then saw how the body was laid, and (verse 56) "returned, and prepared spices and ointments; and rested the Sabbath day according to the commandment." What Sabbath?—Evidently the "one which followed the "preparation" in verse 54, and which was "drawing on," when they took the Saviour down from the cross. Now, if we apply this to the passover sabbath, we must surrender verse 56 as applying to the weekly Sabbath, which is one of the best texts for the perpetuity of the fourth commandment, in all the New Testament. It is surprising that any Sabbath-keeper should be willing to give up this text.

Mark 15: 42: "And now when the even was come, because it was the preparation, that is, the day before the Sabbath." This must be the weekly Sabbath; for the passover sabbath certainly would not be spoken of in this independent manner. It is the opinion of good critics, that the term, "the preparation," does not apply to any feast sabbath, but to the weekly Sabbath alone. Thus Andrew's "Life of our Lord," p. 452, says:

"But the main reason that made a time of preparation necessary for the weekly Sabbath, was, that on that day no food could be prepared, whereas, it could be upon a feast sabbath. Nor anywhere in Jewish history does the latter appear as equal to the former in sanctity and dignity. All labor but servile labor was then lawful. There seems, then, no good reason why every feast sabbath should have had its day of preparation; nor is there any proof of the fact."

On page 453, he adds:

"Thus we reach the result, that the term 'preparation,'

'*paraskeue*,' is never applied, so far as we know, to any day preceding a feast, but is applied by the evangelists, by Josephus, and by the Rabbis, to the day before the Sabbath. Recurring weekly, this would readily become the current designation of the sixth day, and equivalent to its proper name, or to our Friday."

John once uses the word "preparation" in connection with the passover. Thus in chapter 19: 14, he says: "And it was the preparation of the passover, and about the sixth hour; and He said unto the Jews, 'Behold your King.'" Such an expression as this is easily accounted for from the fact that they did, on the fourteenth day of the month, prepare the lamb for the passover, and so we find the expression, "prepare the passover," several times used. But this evidently has reference only to the preparation of the lamb to be eaten that evening, and it is a very different thing from setting apart a day to be called "the preparation day," with reference to a rest and holy convocation to occur on the following day. On this point we quote again from Andrews, p. 453:

"It is insisted that the nature of this preparation is expressly defined by the addition, 'of the passover,' and cannot, therefore refer to the weekly Sabbath. But if '*paraskeue*' is used as equivalent to Friday, it would simply mean that this was the Friday of the passover, or the preparation day for that Sabbath that occurred during the paschal week."

This is certainly a reasonable explanation; and, taken in this sense, the expression, "*preparation* of the passover," would not have been used, had not the rest-day of that passover fallen upon the weekly Sabbath. Thus the evidence still stands good, that the day of the crucifixion was the preparation day; and the preparation day was the day before the weekly Sabbath.

But it is objected that this could not have been the day before the Sabbath, because the women would not have had time

to prepare their spices and ointments (Luke 23: 56) between the death of Christ and the close of the day. Let us see. It was but little past the ninth hour when Jesus cried with a loud voice, "Father, into Thy hands I commend My spirit," and bowing His head expired. (Luke 23: 44-46.) This was about three o'clock in the afternoon. Between that and sunset they had nearly three hours, and the city, where all necessary articles could be procured, was nigh at hand. This would seem to be ample time for what they had to do; and this will appear still more evident, when we consider what others did do: 1. After Jesus was dead, Joseph went into the city, found Pilate in his palace, and obtained leave to care for the body of Jesus. (John 19: 38.) 2. Nicodemus came with a mixture of aloes and myrrh, about an hundred pounds' weight. (Verse 39.) Where did he get this? He certainly did not carry that amount around with him. He must have gone into the city, after Jesus expired and bought those spices, and returned to the cross, and that, too, before the body was taken down. (John 19: 39, 40.) 3. After Joseph obtained permission to take charge of the body, he bought the fine linen in which it was to be shrouded for the tomb. Mark 15: 46.

Now if these noblemen had time, as the record says they did, to go into the city, and make these purchases, and duly robe the body in the linen with the myrrh and aloes, the women had time also to purchase and compound the spices and ointments which they designed afterward to use. But if they did not have time to complete the work before the Sabbath, there was still time in the evening following the Sabbath, to make additional purchases, and to finish the preparations. And the record in Mark would indicate that though they had prepared spices, etc., before the Sabbath, as Luke (chap. 23: 56) declares, they also made other purchases, after the Sabbath; for he says:

"And when the Sabbath was past, Mary Magdalene and Mary the mother of James and Salome, had bought [Greek, first aorist tense, simple past, *bought*, not *had bought*] sweet spices that they might come and anoint Him." This was before anyone had been to the sepulcher; but, having completed their preparations, early the next morning they repaired to the sepulcher, bearing their spices with them. (Luke 24:1.) Thus this objection to the view that Jesus was crucified on Friday disappears.

ARGUMENT FROM THE TYPES.

There is one more line of argument, which is absolutely conclusive in favor of the view that Christ was crucified on Friday and rose on the first day of the week; and that is the argument from the types. Christ was the antitype of the passover lamb. "Christ, our passover, is sacrificed for us." (1 Cor. 5:7.) The lamb was always to be killed on the 14th day of the month, "between the two evenings," (Ex. 12:6, margin), that is, between three P.M. and sunset. (See Robinson's Greek Lexicon, under "*opsia*."') So Christ expired at the legal time, on the 14th day of the month, a little after three P.M., "between the two evenings." The passover He ate with His disciples the evening before, was by anticipation. We know the day He died was the true time for slaying the paschal lamb, or He could not have been a true antitype. The day following, that is, the 15th, was the first passover sabbath. (Lev. 23:6.) And on the morrow after this passover sabbath, the sheaf of first-fruits was waven before the Lord. Lev. 23:11-15.

In proof that "the morrow after the sabbath" (Lev. 23:15) was the 16th day of the month, and that the day preceding it, that is, the 15th, the passover sabbath, is the sabbath referred to, we present the following from Smith's Bible Dictionary, edited by S. W. Barnum. Under "Passover," he says:

"On the 15th, the night being passed, these was a holy

convocation, and during that day no work might be done, except the preparation of necessary food (Ex. 12:16.).... On the 16th of the month, 'the morrow after the Sabbath' (*i. e.*, after the day of holy convocation), the first sheaf of harvest was offered and waved by the priest before the Lord."

Under "Pentecost" he says:

"Pentecost (fr. Gr. *pentecoste*=the *fiftieth* sc. day from the second day of the feast of unleavened bread or the pass-over).....1. The time of the festival was calculated from the second day of the passover, the 16th of Nisan. The law prescribes that a reckoning should be kept from 'the morrow after the sabbath' to the morrow after the completion of the seventh week, which would, of course, be the fiftieth day (Lev. 23:11, 15, 16; Deut. 16:9)."

On the expression "morrow after the sabbath" as given in the foregoing extract, he has this note:

"It has been generally held that the 'sabbath' here=the first day of holy convocation of the passover, the 15th of Nisan mentioned in Lev. 23:7 (compare verses 24, 32, 39). Some have made the 'sabbath' here=the seventh day of the week, or *the Sabbath of Creation*, as the Jewish writers have called it; and thus the day of pentecost would always fall upon the first day of the week. But Bahr proves from Josh. 5:11 and Lev. 23:14 that the omer was offered on the 16th of Nisan."

Bagster's Greek Lexicon, under "Pentecoste," says:

"One of the three great Jewish festivals, so called because it was celebrated on the *fiftieth* day, reckoning from the second day of the feast of unleavened bread, *i. e.*, from the 16th day of Nisan."

Andrew's "Life of our Lord," p. 434, says:

"The ceremonies of the second day of the feast, the 16th Nisan, were peculiar, and important to be noted. Upon this day the first-fruits of the barley harvest were brought to the temple, and waved by a priest before the Lord, to consecrate

the harvest; and not till this was done, might any one begin his reaping. Lev. 23: 10-12."

Similar testimony might be greatly multiplied; but these quotations are sufficient. Let the reader note the order of these events: 1. The paschal lamb was slain on the 14th day of the month; 2. The 15th day was the passover sabbath; 3. On the 16th day, the morrow after that Sabbath, the sheaf of the first-fruits was waved before the Lord. Now as the pass-over lamb typified the *death* of Christ, so *the wave-sheaf typified His resurrection*. Paul not only calls Christ our "pass-over," but he calls Him also our "first-fruits:" "For as in Adam all die, even so in Christ shall all be made alive. But every man in his own order: *Christ, the first-fruits*, afterward they that are Christ's at His coming." (1 Cor. 15: 22, 23.) "But now is Christ risen from the dead, and become *the first-fruits of them that slept*." (Verse 20.) And in fulfilling this type, Christ must follow the same order on the same dates. Thus He was slain on the fourteenth day of the month, which that year fell on Friday. The next day, the fifteenth, was the passover Sabbath, and chanced that year to be the weekly Sabbath also. On the morning after that Sabbath, the sixteenth, which happened that year to come on the first day of the week, *He was raised from the dead*, in fulfillment of the type of the wave-sheaf. There was but one full day, 15th Nisan, between the killing of the lamb on the 14th and the waving of the sheaf on the 16th. So there could have been but *one full day* between Christ's death upon the cross, and His resurrection. Whoever puts in more, shatters the whole typical system into fragments, by making it a failure. But the fact that Christ was crucified the 14th and raised the 16th, does not vitiate the declaration that He was to be "three days and three nights in the heart of the earth;" for that expression in-

cludes, as we have seen, more than simply the time He was in the grave: it reaches from His betrayal to His resurrection; and between those points, there is all the time requisite to fulfill the prediction. (See again the diagram.)

With the view here presented; namely, that Christ was betrayed the evening following the 13th of Nisan, was crucified Friday, the 14th, expired and was buried between three P.M. and sunset of that day, lay in the grave the 15th, and rose on the morning of the first day of the week, the 16th, — with this view, we say, there is the most perfect harmony between type and antitype, prediction and fulfillment, the words of Christ, and the words of His disciples, and the testimony of all the evangelists throughout. There is not a flaw, fallacy, weakness, or discrepancy in the entire argument. And we commend it to all who may have been in anywise perplexed on this subject, as one on which they may rest with all the assurance that is born of demonstration.

U. SMITH.

A Great Error of the English New Testament Corrected.

(DIMBLEBY.)

This point in connection with the events of dates belong to Acts, chaps. 20-24, is an important one in respect to our historical knowledge of St. Paul's travels. It will be seen that by 24: 22, 23 that Felix adjourned St. Paul's case, and then, "after certain days," (twenty-four) probably to another court day. Felix came with Drusilla, his wife, who was a Jewess, and sent for St. Paul in order to hear more of the Christian faith. This act was repeated during the remaining three months of the year.

But in the twenty-seventh verse we are told that "when two years were fulfilled," Felix was succeeded by Festus.

This must be an erroneous translation. It is worse, however, in the authorized version where it says, "but after two years." What the original states is, "When two years were completed," that is, not two years from the adjournment of the case, but when the period arrived in Jewish time, requiring two Lunar years to receive the additional intercalary days. The Jewish years were triple in character, having thirty-four intercalary days at the end of each third year. During the first one, Lunar and Solar time were together, but Lunar years having only 534 days, the second year began eleven days before the Solar, and the third year was twenty-two days in advance of the Solar. Consequently, at the end of these two years, the intercalary days were required to prevent the next year from being thirty-three, but really thirty-four days in advance. This is the meaning of Acts. 24: 27.

Now for the proof. The next chapter tells us that "after three days" Festus went up to Jerusalem. If the reader looks at the Ancient Hebrew Solar Cycle, he will see that the third intercalary day of this twelfth year we have been speaking of, was Sabbath day, so that as Festus would not travel in Judea on the rest day, he would wait until after the third day, which St. Luke here particularizes. Then again, in verse 6, the next Sabbath day is spoken of, namely the 10th, and this clears up the jumble in the margin of the authorized version. Festus seems again to have waited till the Sabbath was over before returning to Cæsarea. These two Sabbath days 3rd and 10th, could not be any other than those in the intercalary days at the foot of the twelfth year of the cycle. They could not be those in the first month of the fifteenth year, because the tenth day was "the Fast," mentioned in Acts. 27: 9.

In addition to this, we have evidence of the apostle being at sea in the intercalary period. The word *ikanais* in the 7th.

and repetition of it in the 9th verse, alludes to this particular time in the sense of *great, adapted, sufficient*. It is commonly used in a demonstrative sense in connection with the intercalary period. It forms the date of St. Paul's conversion, (Acts 9: 23) and of St. Peter's sojourn at Joppa (verse 43,) both alluding to the intercalary period of 4031 A. M., which was 32 A. D., the last year on the Ancient Hebrew Cycle. It is found in the same three senses, though not in relation to time, in Mark 1: 7, Luke 3: 16; 2 Cor. 2: 6, 16, etc. It should, therefore, read: "And when He had sailed slowly in intercalary days," "When intercalary time was gone through (not spent), and the voyage was now dangerous, because the Fast was now already gone by," etc.

I have not space to enlarge on the subject here, but I do not like the English translation of the last chapters of the Acts. Let it, however, be remarked that St. Luke finishes the history of St. Paul where he began it, in the end of the last year of the cycle, forming altogether 30 years, as will be seen by the additional two whole years (28: 30), and this explains the somewhat abrupt termination of the narrative.

I do not mean to say that the Greek word "*ikavos*" always refers to intercalary days. But it does when associated with that period. It is more than thirty years since my tutors taught me to read Greek, but Parkhurst was my first guide to a knowledge of this important word, and I would refer the reader to his copious citations.

ANOTHER MISTRANSLATION.

In the authorized version (Luke 6: 1) we read "On the second Sabbath after the first." No one can understand what this means. But in the revised version, instead of properly amending the Greek, it is ignored, and the verse reads "a Sabbath." There is a marginal note stating "Many ancient author-

ities insert second-first." Indeed, I have never seen any copies without the Greek words. But the fact is, this verse gives us one of the most definite dates of the history of our Lord's ministry. It reads "The Sabbath on the second of the first month." A glance at the Ancient Hebrew Solar Cycle shows that the Sabbath days of the first sacred (seventh civil) month, eleventh year of the Cycle, fell on the 2nd, 9th, 16th, 23d, and 30th days. Why should the historical evidence of the veracity of ancient writings be destroyed by mistranslations of this kind? Before the revised version was published, an official letter was sent to the revisers mentioning the names of two gentlemen who were able to assist them in the translation of chronological expressions, but beyond a courteous acknowledgment of this letter, nothing more was heard of it. The result of this indifference is in the hands of every intelligent reader, because just as the simple use of the multiplication table in every school in England insures the correct adding up of any amount of numbers, so does the application of a system of astronomical measurement provide the accurate determination of periods of time all over the world.

I regret the necessity for speaking so plainly of a work to which I looked forward with gladsome anticipations, but to be silent in noticing so much error, and to allow the New Testament to go down to posterity, stripped of the great scientific testimonies which no other historical work possesses, would, in my case, be unpardonable. *There is not a day or period of time in the Old or New Testament* which is not in perfect accord with the astronomical lines of scientific time derived from eclipses or the transits of the planets, Mercury and Venus, or which is not also determined by the stern application of the *Metonic or Lunar Cycle*, and therefore to obliterate the testimony of authenticity in the Scriptures, or to make them state

what was never written, is to impugn their veracity and allow cavillers to place them on an equality with spurious writings. The religion of the Bible, it should also be stated, is the only one which has a genuine history, and is corroborated by the deductions of science. The Bible is a far greater book than has been supposed. It teems with science, and we ought not to allow skeptical men the opportunity of placing a finger upon its pages.

CHAPTER XII.

"Vox Dei," or Eclipse Line of Time.

NO. 1. ECLIPSE OF THE SUN.

NO. 1. Solar eclipse occurs every eighteen years and ten or eleven days. It thereby moves through the year by being ten or eleven days later each occurrence, and in the course of 651 Solar years completes its Cycle by again taking place on the same date, thus forming a period of time, called the "Great Astronomical Year," to which all history must bow, and against which no man can utter a word.

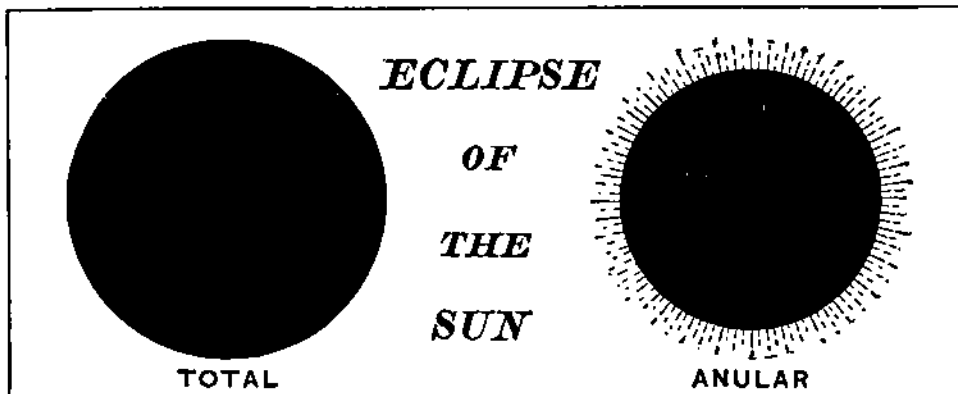


Fig. 5.

PSALM 19: 1-6. "VOX DEI," OR TIME BY ECLIPSES.

We observe time by the enumeration of years, but recent discoveries enable us to do it more accurately, and with greater simplicity, by the enumeration of eclipses, inasmuch as they constitute astronomical measurements against which not a word can be uttered. The method of this new application, which is producing splendid and most gratifying results, is as follows: There are eighteen years and ten to eleven days between the reoccurrence of a *particular* or the same eclipse, that is to say,

the total eclipse of the sun which took place on Jan. 11, 1861, occurred again on Jan. 22, 1879. Hence, this is an important period which may be watched and traced throughout all time. It is also evident that all the intervening eclipses in such a period are part of a common team beginning with this period, in the same way as the intervening days of the week form part of a period of seven days, beginning with a particular day—Sunday. The number of the eclipses taking place in this period of eighteen years and ten days is, as a rule, seventy; the variation arises owing to the appearance of two or three “casuals,” or the omission of a like number of “irregulars” during the succession of the period named, until the eclipses are all back again in their places as to the dates of their occurrence, namely, after 651 years—another grand proof for the scientific measurement of time, as well as a particular junction when we know the position of the eclipses. These 651 years are also the natural consequence of the occurrence of two other periods or cycles, each consisting of eighteen revolutions of the first period of eighteen years and ten to eleven days, which are required for reproducing an eclipse. In other words there are eighteen Common Teams of eclipses in each of the two cycles forming the maximum cycle of 651 years. Eighteen times eighteen are 324, but the cycles, which are respectively marked A and B, are not alike. A consists of 325 years, B of 326.

If a glance be now made of the diagrams and tables, the foregoing explanation will be readily understood. Begin with the numeration of a “Common Team” with the number of each of the 70 eclipses attached, and then look at “Two Consecutive Teams Compared,” viz., the last, or eighteenth of Cycle B, and the first of Cycle A. Notice next the “Bird’s Eye View of the Eclipses in the Christian Era,” which is another representation of the first team of Cycle A, beginning with

Eclipse No. 1 of the 11th of January, 1861, already mentioned.

The great point which had to be determined in this classification of the eclipses was: which is eclipse No. 1 beginning a team? Only the mind of a good chronologist could solve the problem. It was beyond the reach or province of astronomy, though a complete knowledge of that science was also necessary for its solution. The grand discovery had first to be made by resolving dates into their natural Solar Cycles, which is another stern and scientific determination of time, and particularly so with Lunar years, which are definitely formed by Lunar movements. Fortunately, for us, the years of Scripture history are all Lunar, and therefore unalterable, and supplying us with an astronomical line of time which cannot be altered an hour. The Solar Cycle obtained from the Antediluvian dates given us is *independent of the Biblical statement*, the first year of the Cycle as beginning with the first day of the week, and of course, the first Sabbath on the 7th of the first month, a Saturday, and there are several proofs by astronomical and chronological measurements—particularly the eclipses and the Metonic or Lunar Cycle—that this seventh day has come down to our own time, and that the historical or A. M. year 0 was the astronomical year 1. *When this grand point of time was thus found* a host of additional proofs arose corroborating the fact that the central Solar eclipse on January 11th, 1861, is No. 1, the beginning of a Common Team, and first occurring in the first week of the first month in the first year of the first Solar Cycle. Nothing is capable of greater or easier proof, and nothing can be more grand, absolute and scientific than this STARTING POINT OF TIME.

The reader will see that by traveling backwards in date, repeating cycles of 326 and 325 years alternately, as shown in the table of "Eclipses from Creation," that we easily trace No.

1 eclipse back to Mosaic creation, and by the use of the "List of Astronomical Years" we quickly find the year of any eclipse, upon either of the "Bird's Eye Views," for all time. Thus presented, the eclipses verify the true number of the years of the world, because we cannot be deceived unless just 651 years were *cleanly omitted*, and that at the precise period when Cycle A began. But even this would require the breaking up of a Solar Cycle, which in respect to Lunar years is impossible, because they are the register of the movement of the moon. The eclipses and Solar Cycles, with the register of seventh days must agree.

The progression of an eclipse through our year is not accomplished by the same eclipse, as explained in a note above the list of astronomical years, otherwise the repeating date would not be reached, but would be determined in 684 Lunar years, which are 18 times 18. By dividing the Maximum Cycle into two, A and B, respectively 325 and 326, we are able to use the three Solar eclipses of line 1, thus accommodating our Solar year. This will be understood by astronomers, but may be difficult to general readers. It is, however, sufficient to see that the grand result is obtained. In the "Example of the Eclipses Moving through the Solar Year," double dates represent dissimilar eclipses, but the list can be otherwise formed. 5860 was 1860-1 A. D., Total Eclipse No. 1, January 11th.

The adjoining column must determine the number of all past years.

A	1 325
B	326 326
A	652 325
B	977 326
A	1303 225
B	1628 326
A	1954 325
B	2279 326
A	2605 325
B	2930 326
A	3256 325
B	3581 326
A	3907 325
B	4232 326
A	4558 325
B	4883 326
A	5209 325
B	5534 326
	5860

The 651 years during which No. 1 eclipse of the sun proceeds through one year and occurs again at the beginning of January is divided into 325 and 326 years. It will be seen how simple this work is accurately revising the eclipses of the present time, from which we select No 1, to Creation year. The black figures are the product obtained by adding alternately these 325 and 326 years respecting cycles A and B. They are all verified by the "Comparative Analysis," proving that we can neither add nor take away one year of time, or, what is also of greater importance, interfere with the number of cycles. We cannot dislodge the moon from its orbit, and this absolutely proves that its revolutions have always been what they now are, and thus cover the number of years which sacred and secular history supply from the institution of time when Adam was "formed." At the beginning of each 651 years the eclipses must have always stood in the order set out in the "Bird's Eye View" of eclipses, otherwise they could not take place in the order they now do. There cannot be an eclipse of the sun unless the moon be new and as there are 354 days in a Lunar year now, as seen by the fact that in the year 1861 A. D. there was a total Solar eclipse on the 11th of January and another on the 31st of December of the same year, so there were 354 days between the same two eclipses in the time of Noah, because the dates of the Flood supply a Lunar year of 354 days.

The reader will see that from the astronomical year 1 to 5860 there are eighteen cycles formed alter-

nately of A 325, and B 326 Solar years, which collectively are nine Maximum Cycles of 651 years each. Hence the eclipses of the first year must be those of line 1 on the "Bird's Eye View" of a Common Team of Eclipses in order to reach those given in ancient records 900 years before Christ and down to those of our own time corrected after year 4000, when our Era began, because the eclipses before 4000 require no correction. If, then, the reader understands the working of the Common Team as bodily moving like a panorama through the months and across the page (no eclipse leaving its line) in the course of 651 years you will understand how to verify time by eclipses, and know the eclipses which have occurred in each year of all past time. By the directions given under the heading "How to Find the Eclipses," he will be able to do this in half a minute, and on a piece of paper no larger than the nail of his thumb.

The astronomical year is always one more than A. M. year, because it represents present motion and not past time, and starts Creation year as 1 instead of 0. The astronomical year 5860 (bottom of column) was 5859 A. M. and 1860-1 A. D. We are nine months in advance of the astronomical, and one year and nine months before the A. M. year, because our year begins with January instead of at the end of September. This is also proved by the eclipses, because they all occur one year and nine months before the time assigned to them in our almanacs. Just as they would occur by the departure of a train by the time of an erroneous clock which is one hour, forty-five minutes too fast. This fact throws all astronomical phenomena and all history into confusion. For instance, when we trace the ancient eclipses down to our time or compute years of history, we are obliged to make this allowance before we can adjust them. The error starts with the beginning of the Christian Era, and was in-

creased by altering the commencement of our year. Our 1861 began about the commencement of the 4th month of 5859 A. M., which was 5860 astronomical year. If astronomical science had made known this fact two centuries ago, we would have been saved from thousands of errors, and the records of history could not have been doubted. We should have always known that the present precisely requires the past. The eclipses would have been to us as the hours struck in a belfry, and with the years and all the seventh days numbered and consecutive from the beginning of time. All our literature shows how dark the minds of men have been on these simple subjects.

COMMON TEAM OF ECLIPSES (70) OCCURRING EVERY EIGHTEEN YEARS.

As there are seven days in a week, so also are there *about* seventy eclipses in eighteen years, repeating themselves in the same manner as do days in the week. A week is a team of seven days, and a cycle of eclipses is a team of seventy occurring in eighteen years.

The comparison is not *exactly correct*. The Solar eclipses slightly vary in character, that is to say, a partial eclipse may become total, when the time of its repetition after eighteen years arrives, or it may not occur at all; but it ultimately occurs again at the same time and in the same character. Therefore, the subjoined team which is first of a series of thirty-six, when all eclipses are back again in their places as to their dates, is the correct type of a team, and notwithstanding a few changes, is structurally the same. In the next place every eclipse is ten to eleven days more than eighteen years. This fact carries every eclipse through the course of 651 years, that is after the subjoined team has occurred thirty-six times.

The eighteen lines in the following diagram represents eighteen years. The eclipses do not leave their lines. When the extra ten or eleven days have carried each of them to the

LINE. A. M.	CHARACTER AND NUMBER OF THE ECLIPSES.						ASTRON.	A. M.	A. D.
	1	2	3	4	5	6			
1—0	☉ 1	☉ 2	☉ 3	☉ 4	☉ 5	☉ 6	..	5859-60	1861
2—1	☉ 5	☉ 6	☉ 7	☉ 8	☉ 9	☉ 10	☉ 9	5860-1	1862
3—2	☉ 10	☉ 11	☉ 12	☉ 13	☉ 14	☉ 15	☉ 13	5861-2	1863
4—3	☉ 14	☉ 15	☉ 16	☉ 17	☉ 18	☉ 19	☉ 15	5862-3	1864
5—4	☉ 16	☉ 17	☉ 18	☉ 19	☉ 20	☉ 21	☉ 17	5863-4	1865
6—5	☉ 19	☉ 20	☉ 21	☉ 22	☉ 23	☉ 24	☉ 20	5864-5	1866
7—6	☉ 24	☉ 25	☉ 26	☉ 27	☉ 28	☉ 29	☉ 25	5865-6	1867
8—7	☉ 28	☉ 29	☉ 30	☉ 31	☉ 32	☉ 33	☉ 29	5866-7	1868
9—8	☉ 30	☉ 31	☉ 32	☉ 33	☉ 34	☉ 35	☉ 31	5867-8	1869
10—9	☉ 34	☉ 35	☉ 36	☉ 37	☉ 38	☉ 39	☉ 35	5868-9	1870
11—10	☉ 40	☉ 41	☉ 42	☉ 43	☉ 44	☉ 45	☉ 39	5869-70	1871
12—11	☉ 44	☉ 45	☉ 46	☉ 47	☉ 48	☉ 49	☉ 45	5870-1	1872
13—12	☉ 48	☉ 49	☉ 50	☉ 51	☉ 52	☉ 53	☉ 49	5871-2	1873
14—13	☉ 52	☉ 53	☉ 54	☉ 55	☉ 56	☉ 57	☉ 53	5872-3	1874
15—14	☉ 56	☉ 57	☉ 58	☉ 59	☉ 60	☉ 61	☉ 57	5873-4	1875
16—15	☉ 58	☉ 59	☉ 60	☉ 61	☉ 62	☉ 63	☉ 59	5874-5	1876
17—16	☉ 62	☉ 63	☉ 64	☉ 65	☉ 66	☉ 67	☉ 63	5875-6	1877
18—17	☉ 67	☉ 68	☉ 69	☉ 70	☉ 71	☉ 72	☉ 68	5876-7	1878

EXPLANATION OF ECLIPSES.

☉ Central Solar, Total or Annular.

* Partial Solar. (Sun.)

● Total Lunar. (Moon.)

☉ Partial Lunar.

end of the year, they start again in January. In this way the eclipses tell us all past time and form the correct history of the world. The whole of the team bodily moves like a diorama ten to eleven days each team, and so all eclipses come back again to their old places as shown in the "Bird's Eye View of the Eclipses in the Christian Era" diagram. When reversed it starts at the period of Creation, and scientifically proves the number of all past years.

It is only a question of arithmetic to show that eclipses of line 1 were Creation year.

The year 1861 A. D. had the same eclipses as the year 0 A. M., or astronomical year 1.

The astronomical year by counting year 0 as 1, is always one more than the A. M. year.

A Central Solar Eclipse may be total or annular (leaving a ring of the sun to be seen).

The second Solar column gives the first 18 (17) years of Adam's life, having the same eclipses as the 18 years beginning with 1861 of our own time. (See list of Astronomical Years, which carries the team backwards from 1861 to year 1.) This team of 70 forms the Bird's Eye View.

HOW ECLIPSES PROVE ANY PERIOD OF HISTORY.

Methuseleh was born in 687, which was 688 astronomical, Line 1 of eclipses; add 969, the years of his life, it is 970th astronomical year from birth, and we have 1656 for the year of his death. It was the Flood year, at the beginning of which he died, that was 1657 astronomical year, line 4. The eclipses to produce those we now see require these years, and thus show us that the period of his years is correct history.

"BIRD'S EYE VIEW" OF A COMMON TEAM OF ECLIPSES (70) CHRISTIAN ERA.

LINE.	JAN.	FEB.	MAR.	APR.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	PRESENT TEAM IS:
1	☉						☉					☉	1879
2						*					*	☉	1880
3					*						☉		1881
4										☉			1882
5				☉					☉				1883
6			*						☉	*			1884
7			☉					☉					1885
8		☉											1886
9	☉						☉						1887
10	☉					*						☉	1888
11							☉					☉	1889
12					☉						☉		1890
13					*						*		1891
14				☉									1892
15			☉						☉				1893
16			☉										1894
17			*					*					1895
18		☉					☉						1896

The above is the first team of Cycle A, already shown in other forms, as occurring in 1861 to 1878 inclusive. It also shows the time of the month when they occur. They have always this position after 651 years. Lines are years.

[In order to authenticate our chronological tables of eclipses, I wrote Professor J. Morrison, of Washington, D. C., for a record table of the eclipses, for the first century or so. I am happy to give these, not only to confirm the readers in the correctness of these Cycles of Time, but because of Prof. Morrison having given them the more definitely than Prof. Dimbleby, and inasmuch as Prof. M. has given the precise date (*b* and *m*) of their occurrence. Also, in order that our American institutions may know who Prof. J. Morrison is, we give his letter *verbatim*, and following the same his table of Solar and Lunar Eclipses:]

NAUTICAL ALMANAC OFFICE,
BUREAU OF NAVIGATION, NAVY DEPARTMENT, }
WASHINGTON, D. C., Nov. 23, 1892.

ALEX. GLEASON, Esq.:

My Dear Sir—I herewith send you the Eclipse Table you ask for. You can readily extend it by adding on the *Saros* as directed at foot of page. If I were not so busy with official and other duties, I would have extended it to end of century, but I am about overwhelmed with work. I am mathematical and astronomical editor of the "World Almanac," "Brooklyn Citizen's Almanac," and the "Baltimore Sun Almanac," besides other duties, all of which keep me on the "*qui vive*." . . .

EXPLANATION OF THE TABLE OF SOLAR AND LUNAR ECLIPSES.

- (*a*) Means annular eclipse (the sun of course.)
- (*p*) A partial eclipse of sun or moon.
- (*t*) A total eclipse of sun or moon.
- (*at*) Annular at the beginning and total during middle.

By this $\{ \equiv \}$ we understand that there are two or more in the same month. The *Saros*, 18 years, 11 days, 8 hours, are added, or, 18 years, 10 days, 8 hours, when five leap years intervene.

Yours truly,

J. MORRISON.

The table referred to above corresponds to, and coincides very closely with Prof. Dimbleby's "Bird's Eye View of a Common Team of Eclipses, (70) Christian Era."

	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
	D. H.	D. H.	D. H.	D. H.	D. H.	D. H.
1878	.....	{ ☉ a 1 19.7 } { ☉ p 16 23.6 }				
1879	☉ a 21 23.8	.....	.....	.....	.....	.....
1880	☉ t 11 10.8	.....	.....	.....	.....	☉ t 22 1.8
1881	.....	.....	.....	.....	☉ p 27 11.9	☉ t 11 18.9
1882	.....	.....	.....	.....	☉ t 16 19.7	.....
1883	.....	.....	.....	☉ p 22 0.1	☉ t 6 9.8	.....
1884	.....	.....	☉ p 26 18.8	{ ☉ t 9 23.9 } { ☉ p 25 2.3 }	.....	.....
1885	.....	.....	{ ☉ a 16 6.2 } { ☉ p 30 4.3 }	.....	.....	.....
1886	.....	.....	☉ a 5 10.2	.....	.....	.....
1887	.....	{ ☉ p 7 22.7 } { ☉ a 22 9.2 }	.....	.....	.....	.....
1888	☉ t 28 11.4	☉ p 11 11.1	.....	.....	.....	.....
1889	{ ☉ t 1 9.3 } { ☉ p 16 17.4 }	.....	.....	.....	.....	☉ a 27 20.9
1890	.....	.....	.....	.....	.....	☉ a 16 21.9
1891	.....	.....	.....	.....	☉ t 23 6.3	☉ a 6 4.6
1892	.....	.....	.....	☉ t 26 9.2	☉ p 11 11.2	.....
1893	.....	.....	.....	☉ t 16 2.5	.....	.....
1894	.....	.....	☉ p 21 1.5	☉ a 5 16.5	.....	.....
1895	.....	.....	{ ☉ t 10 15.5 } { ☉ p 25 23.6 }	.....	.....	.....
1896	.....	{ ☉ a 13 3.5 } { ☉ p 28 8.2 }	.....	.....	.....	.....

LUNAR ECLIPSES.

JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	
D. H.	D. H.	D. H.	D. H.	D. H.	D. H.	
☉ t 29 9.4	☉ p 12 12.7					
☉ a 18 21.1	.....	.....	.....	.....	{ ☉ p 28 4.2 ☉ p 7 8.8 }	1
☉ a 7 1.6	.....	.....	.....	.....	{ ☉ p 1 15.3 ☉ t 16 3.6 ☉ p 31 2.1 }	2
.....	.....	.....	.....	☉ a 21 4.7	☉ p 5 5.1	3
.....	.....	.....	.....	☉ a 10 11.4	.....	4
.....	.....	.....	{ ☉ p 15 19.4 ☉ a 30 11.6 }	.....	.....	5
.....	.....	.....	{ ☉ t 4 10.1 ☉ p 18 11.6 }	.....	.....	6
.....	.....	{ ☉ t 8 9.3 ☉ p 23 19.5 }	.....	.....	.....	7
.....	☉ t 29 0.9	.....	.....	.....	.....	8
.....	{ ☉ p 3 9.1 ☉ t 18 17.3 }	.....	.....	.....	.....	9
{ ☉ p 8 18.6 ☉ t 22 17.7 }	☉ p 7 5.5	.....	.....	.....	.....	10
☉ p 12 8.8	.....	.....	.....	.....	☉ t 22 0.9	11
.....	.....	.....	.....	☉ p 26 1.0	☉ a 11 15.2	12
.....	.....	.....	.....	☉ t 15 12.1	☉ p 1 0.1	13
.....	.....	.....	☉ p 20 5.6	☉ t 4 4.1	.....	14
.....	.....	.....	☉ a 9 8.2	.....	.....	15
.....	.....	{ ☉ p 14 15.6 ☉ t 28 18.1 }	.....	.....	.....	16
.....	☉ p 20 0.0	{ ☉ t 3 17.8 ☉ p 18 9.8 }	.....	.....	.....	17
.....	{ ☉ t 8 16.6 ☉ p 22 19.5 }	.....	.....	.....	.....	18

The present team of eighteen years (18 lines) of eclipses is the second, the first having begun with 1861 A. D., and ended with 1878. This second team is the same as the first, except their dates, which are all ten or eleven dates later. Thus the eclipse of the moon, No. 13, which in the diagram (showing the first team took place on the 25th of November, 1863,) occurred on December 5th, 1881, eighteen years later. Its next appearance will be December 16th, 1899; after 651 years they all will have moved through the year and be back at their old places. Hence, the eclipses measure time in teams back to Creation, beginning the foregoing diagram—"Bird's Eye View of a Common Team of Eclipses."

PRACTICAL USE OF ECLIPSES IN PROVING HISTORY.

By simply noticing the eclipses as they occur year after year, the reader will see that they can be applied to greater practical use.

To point out this practical use, let the reader give his attention to the following remarks: By looking at the diagram called the "Bird's Eye View of Eclipses of the Christian Era" [on a preceding page of this work] he will see that the eclipses occur during a period of eighteen years. The diagram gives them from 1861 to 1878 inclusive, and each year is a line. Consequently, they all come over again in the next eighteen years, viz., 1879 to 1896, inclusive. The eclipses never leave their respective lines, but they move from the left side to the right, by progressing ten to eleven days each occurrence. In other words, all the eclipses of the present eighteen years are taking place ten to eleven days later than they did in the previous eighteen years. As a week has seven days (and called by their names respectively), each of which is numbered from the first to the seventh, so eighteen of these eclipses consist of eighteen years, each of which is called a line, numbered

from 1 to 18. This simple observation explains the order or system of eclipses, and always shows where we are in the course of time or progress of the history of the world. We know where we are in a week when it is Wednesday, that is to say, how far from the beginning of the week or how near its end. So also, by calling the eighteen years (which is the length of the period containing the eclipses), eighteen lines, we know where we are in each line. For instance, the year 1883 is the line 5, and the eclipses of the year will be seen on the line, except in case of a variation sometimes occurring in respect to those of the line. Hence, line five, eighteen years ago, was 1865, and when we have got through the present eighteen years, it will be 1901. In each of these years, viz., 1865, 1883, and 1901, the same eclipses occur, and as line 1 was Creation year, the eclipses of 1883 will be the same as those in Adam's fifth year.

This subject calls for a few observations respecting chronological Lunar motions. Both the position and shape of the orbit of the moon are continually changing. They do not, however, undergo changes which have not previously existed; for, although some astronomers seem to be much perplexed by these changes, the ancient and periodical character of extra solar eclipses, or the omission of others, conclusively show to my mind that each change, whether of position or shape, has previously existed. All the fluctuations may be reduced to simplicity by observing their periodical occurrence, and for myself I prefer to abide by such observation, rather than trouble myself with the perplexities arising from the effect of the attractions of other orbs on the moon and the tilted position of her orbit in relation to our ecliptic. It is evident that the fluctuations are not always such as the supposed law of gravitation requires. I cannot, however, omit expressing my admiration

of the unalterable precision of the movements of the moon and the continued dimensions of its orbit. The Lunar year has now 354 days, and it is evident by the dates of the Flood that it was the same length in 1656 A. M. It is, therefore, surprising that with so many contingencies no change has taken place in the distance of the moon from the earth or the period of the eclipses.

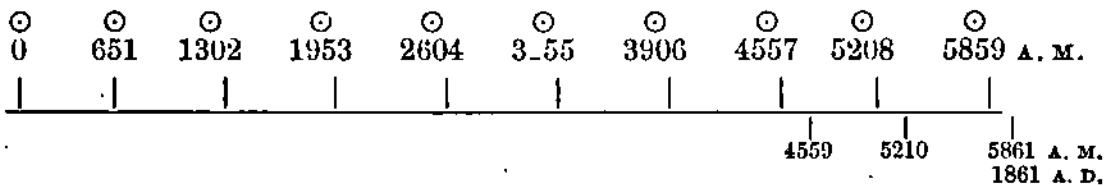
In support of the statement that our ideas of the Newtonian law of gravitation are not sufficient to account for all we see of the motions of planetary worlds, it is only necessary to add that in addition to the continued chronological precision of the movements of the moon, notwithstanding the "drag and pull" of neighboring planets, there are other singular things never accounted for. The motions, for instance, of the satellites of Herschel, or Uranus, are in a contrary direction to those of all other primaries; and in the next place the erratic movements of comets have little coincidence with gravitation. I do not deny the operation of this law, but unless we allow something else, how is the zone of the asteroids—now numbering 228 interlaced orbs—preserved without "THE CRASH OF MATTER AND THE WRECK OF WORLDS?" In fact, we cannot understand the axial revolutions of the sun, the planets and their satellites. We call gravitation a Law. More properly it is Force, and by noticing that it is often *Force controlled*—as is evident by securing chronological precision amidst opposing contingencies—may we not regard the motions of ALL WORLDS AS THE PRODUCTION OF WILL?

[We cannot understand how any intelligent astronomer can retain faith in the Newtonian system of astronomy, or his law of gravitation. The existing facts referred to by Mr. Dimbleby in the above are sufficient, to forever annihilate the inherent powers of worlds and systems *running themselves* by their own inherited *centripetal* or *centrifugal* force or attraction. Which is

it, we ask? If by continued journeying toward a magnetic attraction, do we reach that point where we are *drawn* or *forced*, after long *ages* or *cycles* have elapsed, to return to the place of beginning? and if so, or if it be either "force or attraction," from what source is it derived? Is God the servant of the laws He has made, or is Nature the servant of her Creator, and is she not sustained by Him? Are not "*all* things upheld by the Word of His Power?" (Heb. 1:3.) And since we have proven His Word by so many infallible sources let us take it as a sure guide, and believe that "By Him were all things created that are in heaven and that are in earth, visible and invisible, whether they be thrones or dominions, or principalities, or powers; all things were created by Him and for Him; and He is before all things, and by Him all things consist." (Col. 1:16, 17.) If we believe the latter quotations we have a resting place for the wearied expanse of thought and sublime contemplations; otherwise, like Noah's dove, we "have no rest for the sole of our foot."]

A GAUGE PROVING ALL PAST TIME.

No. 1, central Eclipse of the Sun ☉ repeats its date every 651 years.



In the top row of figures, 0 is Creation period, year 0, and each successive year is obtained by the addition of 651 years, when Eclipse No. 1 reaches its cycle again nearly at the same date of the month, namely, at each thirty-sixth appearance. The thirty-six occurrences are each after a period of eighteen years and ten or eleven days. It is these ten days that carry the eclipse through the year (10 times 36 are 360), otherwise, the eclipse would always be on the same date. Nothing,

therefore, can be more simple or more reliable than this gauge of time, particularly as we have many ancient records. But by our almanacs Eclipse No. 1 appeared on January 11th, 1861, instead of in 1859. To rectify the error of our Solar year amounting to one year and nine months, a second row of years is required under the long gauge line. That it is an error occurring by three or four muddled alterations since the Christian Era began, is proved over and over again by the records of eclipses before the birth of Christ. No man can make the eclipses take place at the periods assigned to them in our almanacs without stretching the line of time. Hence, we find in the works of leading minds, such as La Place and others, discussions about alterations in the orbit of the moon. We are immensely indebted to the old astronomers, but they have not been time-keepers. The above are mile-posts of all time.

CHRONOLOGY.

Authenticated by the British Chronological Association.

	A. M.
Mosaic Creation, Sunday, 1st day of the 1st month of 1st year of the Solar Cycle	0
This was 1656 years before the Flood and 3996 B. C.	
Appointment of the Flood made known to Noah, Saturday, 17th of 2nd month	1536
Obtained by falling on the "self-same day" of the week and date of the month, 120 years before Noah entered the Ark. See Genesis 7:3 and 7:13, with 5th year of the Antediluvian Solar Cycle. A splendid confirmation of history and the Cycle.	
The Flood, Saturday (Sabbath day), 17th of 2nd month	1656
Abraham left the city of Ur, beginning the sojourn, Tuesday, 15th of 7th month	2082
This is the beginning of the period which terminated on the "self-same day" of the week "at the end of the 430 years. See Ex. 12: 41-51, and Hebrew Solar Cycle, Tables <i>a</i> and <i>l</i> .	
Israelites left Egypt, Tuesday, 15th of 7th civil (1st sacred) month...	2513
Death of Aaron, Saturday (Sabbath day), 1st of 11th civil (5th sacred) month	2552
Jordan crossed by the Israelites, Friday, 10th of 7th civil (1st sacred) month	2553
Dedication of Solomon's Temple, Wednesday, 7th of 1st civil month	3000
The seven days' dedication were Wednesday, 7th, to Tuesday, 13th, inclusive. Wednesday, 14th, was an "eighth day," made a solemn	

assembly. Thursday, 15th, to Wednesday, 21st, were seven days' feast of tabernacles. Thursday, 22d, was the other eighth day, and "on the 23d day (evening of Thursday, 1 Kings 8: 66 compared with 2 Chron. 8: 10), he sent the people away."	A. M.
Ezekiel's "Visions of God," Saturday, 5th of 10th civil (4th sacred) month.....	3410
Birth of Jesus Christ, end of 3rd civil month—best found by Josephus' eclipse.....	3996
Christian Era began at the end of 3rd month. (Year 1 ought to have been 4001).....	4000
Crucifixion, Friday, 15th of 7th civil month (A. D. 30).....	4029
Pentecost, anniversary of the Law, 50th day from the Passover and from the Crucifixion, Sunday, 7th of 9th civil, or 3rd sacred, month.....	4029

The above are accurate astronomical measurements as well as records of history. Events recorded on Solar years, soon after the commencement of the Christian Era, cannot be correctly given without altering their dates, which are erroneous and do not agree, more or less, with astronomical time.

THE SUN DIAL OF AHAZ.

The incident mentioned in 2 Kings, 20:9, by which the sun dial of Ahaz went ten degrees backwards, could be occasioned by the total eclipse of the sun. Bible margin gives the year 713 B. C., deduct this from 4004 A. D., 3291 A. M. is the product. In the "List of Astronomical Years" line 1 was 3292 astronomical, which would be 3291 A. M. But I do not say this was the cause of the phenomenon.

THE SEVENTH DAY VS. THE FIRST.

The reader will observe the Divine exaltation given to the seventh day (Saturday) throughout Old Testament history, such as the nine dates of the Flood, and about a similar number in Ezekiel, all, with other examples, showing their connection with the first seventh day in Eden. But when we come to the New Testament, the same Divine exaltation is given to the first day of the week. St. John seems particularly to have called attention to this significant fact, which to the men of his

generation would be one of importance, by writing: "I was in the Spirit on the Lord's Day." I am, therefore, of opinion that our obligation to observe the latter is of equal force with the observance of the former by those who lived before Christ. I have a very large number of these examples of Divine selection, under the two dispensations; but they have been crowded out the present issue. Let me, however, say: the chronological character of the desecration of the Sabbath, under either dispensation, seems to be mutiny or rebellion—the highest offense—more as the rejection of Divine government than the breach of a moral law,—J. B. DIMBLEBY, London, E. C.

We have endeavored to give the opinions of wise and scientific men honor due in regard to all scientific questions; but when such questions make a *tangent* direct from the manifest teachings and plain Word of God, it is then that the Word should have a voice; that it may speak for itself, and readers be not deceived. We have found a paragraph of Mr. Dimbleby's which expresses his view of both the first and seventh day of the week, as to the sacredness of each. We freely give space to and quote the (above) paragraph, lest we should be considered guilty of suppressing it for a motive; for to his opinion Mr. Dimbleby has the same moral right that every other man has, or should have. Inasmuch as we have proven the Bible the infallible Word, we will let it speak a few words and then we will close this part of the work by hearing a few historical writers' testimony, and leave the reader to decide in his own judgment as to the convictions of Truth:

1. Is Sunday called the Lord's day in Rev. 1: 10 which Mr. D. quotes?

"I was in the spirit on the Lord's day, and heard behind me a great voice."

2. What day has the Lord always claimed as His?

“But the seventh day is the Sabbath of the Lord thy God.”
Ex. 20: 10.

3. What does the Lord say of His holy day, by the prophet?

“If thou turn away thy foot from the Sabbath, from doing thy pleasure on my holy day; and call the Sabbath a delight, the holy of the Lord, honorable; and shall honor Him, not finding thine own pleasure nor speaking thine own words; then shalt thou delight thyself in the Lord.” Isaiah 58: 13-14.

4. Of what did Jesus say He was Lord?

“Therefore, the Son of man is Lord also of the Sabbath.”
Mark 2: 28.

5. Did Jesus recognize the Sabbath as still existing at the time of Jerusalem's destruction, about A. D. 70?

“But pray ye that your flight be not in the winter, neither on the Sabbath day.” Matt. 24: 20.

6. Remembering this injunction of their Lord, and acting upon it for nearly forty years, would the disciples forget the Sabbath day?

7. Is God particular to have His words obeyed to the letter?

“And in all things that I have said unto you be circum-spect; and make no mention of the name of other gods, neither let it be heard out of thy mouth.” Ex. 23: 13.

8. Will He accept a substitute for what He has commanded?

“And Nadab and Abihu, the sons of Arron, took either of them his censer, and put fire thereon, and offered strange fire before the Lord, *which He commanded them not*. And there went out fire from the Lord and devoured them, and they died before the Lord.” Lev. 10: 1, 2.

9. What said Jesus on the subject of substitution?

“But in vain do they worship me, teaching for doctrines the commandments of men.” Matt. 15: 7-9.

a—What does our historians say about the matter?

“History does not furnish us with a single proof or indication that it was at any time so observed previous to the

Sabbatical edict of Constantine, in A. D. 321."—Examination of the Six Tests, p. 291.

b. What do our best Encyclopædias say?

The Encyclopædia Britannica, after calling attention to the usual Scripture arguments, says: "Still, it must be owned that these passages are not sufficient to prove the apostolic institution of the Lord's day, or even the actual observance of it."—Art., Sabbath.

"Chamber's Encyclopædia" says: "By none of the Fathers before the fourth century is it identified with the Sabbath, nor is the duty of observing it grounded by them, either on the fourth commandment, or on the *precept* of Jesus or His apostles."—Art., Sabbath.

c. And what does orthodox theology say?

Buck's Theological Dictionary, p. 403, after presenting all the first-day arguments, says: "These arguments, however, are not satisfactory to some; and it must be confessed that there is no law in the New Testament concerning the first-day."

Kitto, speaking of the time of Chrysostom, A. D. 360, says: "Though in later times we find considerable reference to a *sort of consecration* of the day, it does not seem at any period of the church (ancient) to have assumed the form of such an observance as some modern religious communities have contended for. Nor do these in any instance *pretend* to allege any *Divine* command, or even *apostolic practice*, in support of it."—Cyclopædia of Biblical Literature, Art. Lord's Day;" Andrew's History of Sabbath, p. 363.

With these faithful and impartial records, for Divine truth, we leave this branch of evidence to proceed with the second part of this book.

IS THE EARTH A GLOBE?

PART SECOND

CHAPTER XIII.

Demonstrated Evidences that the Earth is Not a Globe.

WHEN producing the most infallible evidences in regard to unscriptural tenets or dogmas, which have long been held, and quite universally believed, notwithstanding the evidences and tests that may have been demonstrated by an axiom, and is virtually evident to the child of twelve years, we are met with something like this: "Why have not the savants of the world found this out before? Do you know more than all the wise men that have lived before you?"

We have no reputation as a philosopher, astronomer or a savant, to sacrifice. We have no stakes driven or anchor cast that we cannot take up for demonstrated truth, and facts evident to the degree of sense and reason that we possess.

It has been stated, and perhaps honestly supposed, that either the globular theory of the formation of the earth, or the earth a plane, could be proven and sustained by the Scriptures. But the infallible evidence that we have previously produced in the forepart of this work, is sufficient to silence any just entertainment of such an idea. "That no two facts or truths disagree," having been our motto, we, therefore, laid our foundation for proof of our position from the Scriptures in the forepart

of our work. We now start on this branch of the subject, with that which we believe to be the *true laws of science and mechanism*, and that which will be sustained by the infallible Word.

We have been taught that this earth is a globe, approximately 8,000 miles in diameter, consequently about 25,000 miles in circumference. This circumference *necessarily* forms a curvature of eight inches to the mile; this is accepted, and is the *acknowledged standard* by all surveyors, engineers, navigators and astronomers of the world, who believe the so-called Newtonian theory. This amount of curvature to the mile (on a circle of 25,000 miles), may be, and has been proved correct, not only by figures, but by draught or diagram. If it is desirable to demonstrate the matter by draught on a regular scale, we give the following for those who have not the knowledge or experience of a practical draughtsman: For the convenience of the mechanic, or anyone who may have a scale graduated to hundredths of an inch, let them strike one-fourth of a circle, which radius shall be forty inches; this represents one inch to every 100 miles, consequently, the hundredths on your scale represents the miles on your diagram. From the *center* draw a vertical and right angle parallel line to the periphery of the arc; you now have a geometrical quadrant of the circle; you now have a right angle whose two sides are forty inches each; next draw a tangent line from each end of the arc, and square the arc; you now have an arc forty inches square, the radius of which is equal to its sides, or forty inches. From the periphery of the arc run forty lines, one inch apart, vertical and horizontal to the edge of the square. This being done you have a diagram, which, if accurately drawn, gives the amount of curvature, or divergency from the vertical in miles. While this diagram does not give the fractional part of a mile on so small a

scale, yet it is quite satisfactory, in round numbers showing that the accepted system of calculating the curvature on a circle 25,000 miles is correct. Further on we give a scale less complicated that may aid in the construction of the above.

That about *three-fourths* of the surface of the *supposed globe* is water, we need not stop to prove. And so *sure* as this is the case, so sure the waters conform to that curve, and make *three-fourths* of the surface of the globe. Whether the waters are in a canal, ditch, lake, or ocean; whether a body of water one inch in depth, or three miles in depth, whether it is the weight of a feather, cobweb, or a thousand tons; whether it be at the *supposed* poles of the globe, where the motion could be *only half* the motion of the *hour-band of the clock*, or one thousand miles an hour at the equator; all must conform to that curve, and those motions; all must be held in position by *the same attraction*, or force.

But before we speculate further, or multiply wonders, let us see if we can prove that *water has no curvature* or convexity. If we fail to do this, we fail of sustaining our faith and position. In order to get a straight line we must first get something that does not conform to any curve whatever, in any direction, in the least particle. Where, and what shall we take to test this matter? Happily, there are two things that can be demonstrated to be straight: the *rays of light* and the *line of sight*. If there remain the least doubt in regard to the first, take a straight stick and a lamp, and see if you can throw a shadow around the corner of a square box or cube. If, in regard to the second, there remain a question, just see if you can see around the corner of the house or over the top, by any device — try a crooked tube, if you please. We admit that reflection and refraction, either, may produce an image of a substance. But *not the real substance*.

Mr. Webster says that a "*straight line* is the shortest distance between two given points.' Grant it; and who can give a better definition? But it will be interesting to follow Mr. Webster a little in his definitions of his geometrical lines, and notice how "straight" he works. He defines a level thus: "Not having one part higher than another; even, flat, smooth, horizontal; *a line everywhere parallel to the surface of still water.*" He also says, "It is a curve, the center of which *coincides* with the *earth's center*; a horizontal line or surface." (All waters conform to the *curve* of the earth's surface.) Here Mr. Webster calls a *level* a *curve* and conforms it to the supposed curve of the earth. Now, we will notice what Mr. W. says in another place, under the head of "curve," as especially giving a definition of the word: "A line of which no three consecutive points are in the same straight line." And who could give or ask a better definition? It is, without doubt, the evident conception of every intelligent mind in regard to a curve. But, Mr. Webster, you have just defined a level as not having one part higher than another; you also say it is a curve. We have no railings against the much-honored professor, but leave the matter for the time with the reader, to draw such conclusions as best he can. We venture to assume, however, that he has followed a hypothetical theory, taking things for granted without a demonstration. But these conclusions of Mr. Webster are inevitable to all who take the Newtonian theory; "that *even, flat, smooth, horizontal—a line or plane—is everywhere parallel to still water;*" and again he says: "A curve is a line of which no three consecutive points are in the same straight line;" viz., that *a straight line* or the shortest distance between two given points, is a curve, conforming to the curve of the earth! Then, Mr. Webster, we would ask which way,

or to what part of the earth, does a vertical line conform, drawn through the center of the supposed globe?

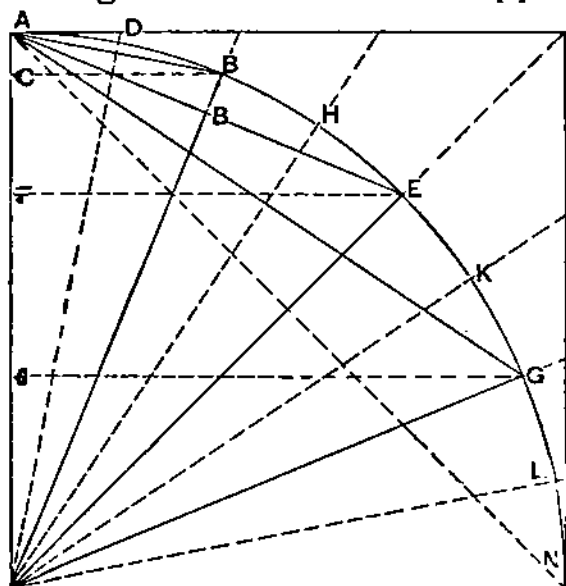


Fig. 6.

Figure 6 is a diagram and *proportionate scale*, showing the amount of divergency there would be circumnavigating a globe eight thousand miles in diameter, also the amount of convexity there would be above an air or straight line drawn from point to point on a globe.

We will now start at the left hand upper corner at A and go to B; we have certainly gone down to C on the vertical, and D is the chord of the arc, or the convexity existing between point and point—A and B. Again, start at A and go to E; we have descended to F on the vertical, and the convexity is B B' or one fourth of the distance from A to F. On the periphery of the arc the radiating lines are equally distanced apart, while A, C, F, J and the radiating point shows the actual amount of increase downward there would be in sailing around a globe whose poles are vertical, or even inclined, as claimed. At N, the equator, if sailing north or south the ship is vertical; if she changes her course, and sails at right angles with the ship's compass, she is then on beam's-end and at right angles from her former position.

By this scale we demonstrate to an *infallible certainty*—First: That the amount of divergency as we go from the prime vertical, is eight inches multiplied by the square of the distance. Example: Let 15 miles be the distance, $15 \times 15 = 225 \times 2 = 450 \div 3 = 150$. (See table for curvature.) Second: That the amount of convexity between two given points on any

circle is, approximately, one-fourth of the divergency. (See diagram, fig. 6.)

The above rules are the accepted ones by scientists of the day, and for the first thousand miles the divergency or downward tendency increases at a greater *pro rata*, while the apex of the convexity or chord of the arc ever remains the same ratio to distance.

We will notice another standard work in regard to this straight and curved line theory. The Encyclopædia Britannica says: "The amount of curvature or diverging from the vertical increases as the square of the distances. That the curvature of the earth is eight inches for the first mile, thirty-two for the second mile, and so on." In other words, square the diameter, multiply the product by eight and divide by twelve, if you wish it in feet and inches. This formula is the accepted one throughout among navigators, astronomers, etc.

But we will just now inquire in regard to a *level*. "A line drawn at right angles, crossing the plumb-line (or vertical), and touching the earth's surface is a *true level* only in that particular spot; but if the line which crosses the plumb be continued for any considerable length, it will rise above the surface, and the *apparent level* will be above the true one."

Now, there are things that are *apparent* that are true, also things apparent and yet *untrue*. We shall, therefore, try to make demonstrated facts appear as such. As we have before alluded, there is a *standard* to which all intelligent people who have eyes, whether cross-eyed, nigh or far-sighted, may resort for proof, viz., the *line of sight* and the *rays of light*. It is a fact which no astronomer, surveyor or engineer will deny or question, that the theodolite (telescope and level of the surveyor) conforms to and coincides with the *spirit level*, and these coincide with the line of sight, which *does not* conform to

the supposed curve of the earth or to any curve whatever, *apparent* or *unapparent*.

For the convenience of the readers of these pages we give a table which will show the amount of curvature, from one mile to one hundred, in feet and fractions thereof. The same may be found in any standard work on Geodesy or Geometry. To find the curvature in any number of miles not given in this table, square the distance by itself, multiply that product by 8 and divide by 12; the quotient is the curvature required. Another simple and short method is: Square the distance, of which the amount of divergency is required, multiply the product by 2 and divide by 3. Example, distance 20 miles: $20 \times 20 = 400$; $400 \times 2 = 800$; $800 \div 3 = 266\frac{2}{3}$ feet, or 266 feet 8 inches. The hill or apex of curvation between point and point, as a matter of course, would be just one-fourth the amount of divergency downward from the vertical of the two points in question. (See also diagram and explanation, fig. 6.)

Table for Curvature of the Earth.

Miles Distance	Feet	Miles Distance	Feet
1.....	0. 8	30.....	600
2.....	0.32	40.....	1,066
3.....	6	50.....	1,666
4.....	10	60.....	2,400
5.....	16	70.....	3,266
6.....	24	80.....	4,266
7.....	32	90.....	5,440
8.....	42	100.....	6,666

We now offer a few facts which have been demonstrated, and may be repeated by anyone so disposed, that fully illustrate, and also corroborate the impossibility of convexity to water, or in short, of the earth's being a globe.

I have on my table a profile map of the canals of the state of New York, recently procured of the State Engineer and Surveyor, at Albany, N. Y. This map shows the elevation of the

water's surface and the length of each level, or distance between each lock on the Erie Canal, also the altitude of each level above tide water at Albany. Now, according to this State Survey (of which we know no negative question), there are two so-called "levels" of the following lengths, the longest level being sixty-two miles between the locks at Lockport and those at Rochester: The fall of water on the line of sixty-two miles is three feet in the entire level or cut, whereas if the earth were a globe 25,000 miles in circumference and the proper allowance be made for curvature, there would be a divergency from either end of the cut of 2,562 feet 8 inches, according to the accepted formula given, or diagram fig. 6; or the apex of the arc of that distance would necessarily be one-fourth that amount, equalling 640 feet, minus 18 inches, allowance not made for the three feet fall in the level.

The next longest level on the Erie Canal is between Syracuse and York Mills, and it is fifty-two miles without lock or gate; it is 428 400-1000 feet above the level of tide water at Albany, the altitude being the same at each end, and throughout the cut it is straight, on the bottom, conforming to the line of sight by the *surveyor's theodolite* and *transit level*.

There should be in the latter case (according to the Newtonian theory), a divergency in the fifty-two miles of 1802 feet 8 inches, or an intervening convex of 450 feet 8 inches.

Tests on Lake Erie.

I will now give my own experimental tests as to the convexity of the waters of Lake Erie. On July 4th, 1887, whilst standing on the bank of the Niagara River and near its mouth, I concluded that I saw a point of land, known as Lighthouse Point, on the south shore of the lake. My suppositions were questioned by some standing by, and I was informed by an old seaman that it was thirty miles to Lighthouse Point, and that

it lay by line of sight behind another prominent point, known as Sturgeon Point, the latter about 20 miles. Anxious to settle the matter beyond doubt, I took a pocket field or marine telescope, and in a few hours—about 10 A. M., via. L. S. & M. S. R. R.—I arrived at Silver Creek, a village of two or three thousand inhabitants, Lighthouse Point being about one-half mile from the railroad station or the village. I there found a Mr. A. E. Arnold, a civil engineer of the Nickel Plate Railroad, and engaged him to go out to the point, taking his two transits or theodolites, to take a level of the waters and make such observations and demonstrations as our instruments would furnish. As we reached the prominence and point extending into the lake, I discovered the smoke of some steam craft up the lake and just at the horizon line; the smoke was all that could be seen by the unaided eye. Before directing the large transit to the object, we went down from the elevation some twenty-five or thirty feet to the water's edge, and set the legs of the instrument in the water's edge, so that when leveled, the telescope stood about five feet above the water. As the instrument was directed, I said: "Have you got it?"

"Yes!" says Mr. Arnold.

"Does the *line of sight* intersect the water?" says a bystander.

"No;" was the reply of Mr. Arnold. (Previously to setting the telescope, Mr. A. had judged the vessel to be twenty miles or more distant.)

"How far do you now think the vessel is?" I asked.

"About ten miles," was replied.

"How far down would ten miles put the vessel?" I asked.

Ten miles would require a divergency of 66 feet, 8 inches, according to the formula. Mr. Arnold, seeing this, says: "How high are those propellers, Mr. Gleason?"

"About 60 feet from the water to the top of the smokestack."

"And yet you see the entire vessel from the top of the smokestack to the water beating against her bow. After making due allowance for the five feet of the transit above water, according to the formula we would not any more than see a *very small portion*, if any, of her smokestack. I don't understand it!" says Mr. A.

"Now, please direct the instrument to the Canada shore," said I.

This being done, I was invited to look through the leveled telescope; and as I now have before me a *Government Marine Chart*, giving all points and distances on Lake Erie, I give the same according thereto. From the point where we stood to the Welland Canal on the Canada shore is 22 miles, and from the same point of observation to the mouth of the Niagara River (my first starting point), is $27\frac{3}{4}$ miles. We could behold the land at intervals all along the Canada shore to the mouth of the Niagara River, or the northern portion of Buffalo. The land showing under the cross line of the telescope, indicating the same, as near as we could judge, on one shore as on the other—the sea being quite smooth, we could judge approximately. The line of sight, or point of compass, from the mouth of the Niagara to Silver Creek, or Lighthouse Point, is S. E. by I. E., and this line of sight lacks just one mile of *intersecting Sturgeon Point*—which has been suggested to me as a barrier preventing the sight of the point, but this is not the case.

An old and true adage is, "You cannot have two hills without a hollow." It is equally true that there cannot be two points on a *globe* without a hill or convexity between.

Again, according to the globular theory, also according to geometrical demonstrations by actual draught, in the twenty-

seven miles the line of sight from either end of the distance would strike the water at about five miles, should the parties stand at the water's edge, and run above the heads of each about 400 feet. (See diagram, fig. 7) It is true and obvious

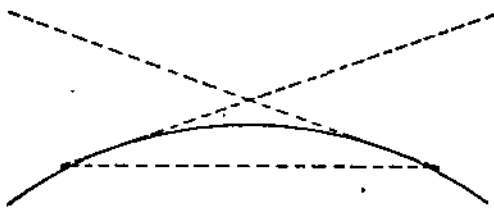


Fig. 7

to every practical draughtsman, that it is necessary in order to represent feet or even many miles of so large an object as the earth, that our diagrams cannot, in de-

tail, be given correct, therefore, they are exaggerated, and some have accused us of doing this to mislead, but judge as you please, the plain figures will tell the truth, though the diagram may be only an illustration of our ideas.

Suez Canal, One Hundred Miles Level.

We will now look at the waters of the "Deep" where the "Spirit of God moved," and performed the first act of His Creation, so far as the earth is concerned, at least. (Gen. 1: 2, 3.) "Where He founded and established it." Psalms 24: 2.

In the *Encyclopædia Britannica* there is an elaborate description of the "Suez Canal," with detailed maps, drawings, etc. This canal connects the Mediterranean Sea with the Gulf of Suez on the Red Sea, and furnishes a fair sample between *theoretical* and *practical engineering*. "The canal is 100 miles in length and without locks throughout the entire length, so that the waters within it are simply a connection and a continuation from sea to sea. The average level of the Mediterranean is said to be six inches above the Red Sea; yet the *flood tides* in the Red Sea rise some four feet above the highest, and its ebbs fall nearly three feet below the lowest in the Mediterranean." The *datum line* of the canal is twenty-six feet below the level of the Mediterranean, and is continued level, horizontal, from one sea to the other; and throughout the whole

length of the work, the surface of the water runs parallel with this *datum line*. This *datum line* is just what fixes the matter and establishes the difference between what science preaches and what she *cannot, nor dare practice*.

“A Book of British Standing Orders.”

In the British House of Parliament, in London, is the following standing order, accompanied by a diagram, the only diagram in the book of Standing Orders.

“Ordered by Lords, spiritual and temporal in Parliament assembled,

“That the section be drawn to the same horizontal scale as the plan, and to a vertical scale of not less than one inch to every 100 feet, and shall show the surface of the ground marked on the plan, the intended level of the proposed work, the height of every embankment, and the depth of every cutting, and a *datum* horizontal line, which shall be the same throughout the whole length of the work, or any branch thereof, respectively, and shall be referred to some *fixed point* stated in writing on the section, near some portion of such work, and in the case of a canal, cut, navigation, turnpike or other carriage road or railway, near either of the termini.”

But why, my Lords, this “Standing Order?” It seems that the inference may be a just and conclusive one, that at some previous date engineers or surveyors have made a bad job by allowing for *curvature*, and in so doing it has taught their lordly science a lesson from which this *legal standard* is established. *True theory* and practice run very close together, but here we notice that *education* (experimental) has forbidden, by law, the two to blend. Let us imagine for a moment what the result would have been in the case of the cut of the Suez Canal had they followed the fondly-cherished Copernican theory. In order to properly illustrate this matter of curvature we have made the following diagram:

Let the arc from B to B, in figure 8, represent the 100 miles length of the canal. In the 100 miles we have gone down 6,666 feet 8 inches. The chord of the arc would be 1,664 feet between A and C C.

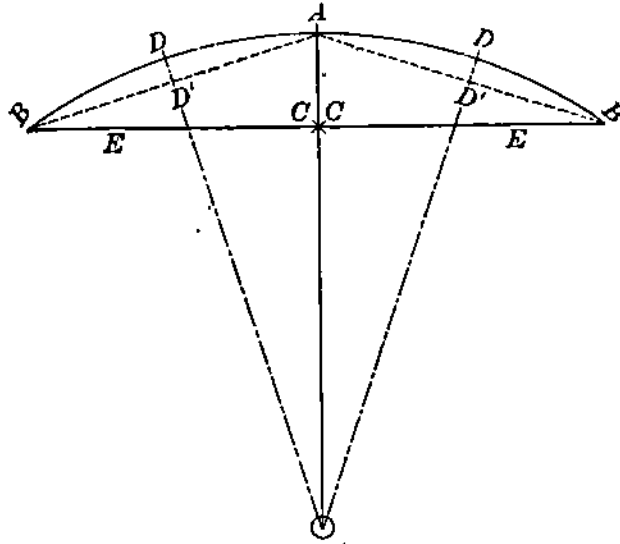


Fig. 8.

Now, we will start in the middle of this work at A and go either way to B, and it is evident, beyond the shadow of a doubt, that we have descended on the vertical from A to C C, and made a cut or hole in the earth 1,666 feet at either end of the arc B B, and from D to D is the chord and apex of the arc, showing a convexity of one-fourth of the divergency, or 414 feet in the 50 miles from A-B.

To speak without exaggeration, a thousand parallel cases might be given, but if we let hypothetical theory run away with our senses, then demonstrated facts have no bearing on the point.

We are satisfied that we have abundantly proven that the *earth is not a globe*; yet, we would not like to ignore some of the most commonly *supposed* reasons and *alleged* demonstrated facts to the contrary.

In "Elements of Astronomy," by Lockyer, p. 82, published by Appleton & Co., 1883, is an illustration of five vessels

at various distances from the shore to the horizon line and beyond, as shown in the first diagram following. This he gives to *demonstrate* the globular shape of the earth. He says: Moreover, if we watch ships putting out to sea, we loose first the hull, then the lower sails, until the highest part of the *masts* disappears. If the surface of the earth were flat, or an extended plane, this would not be so."

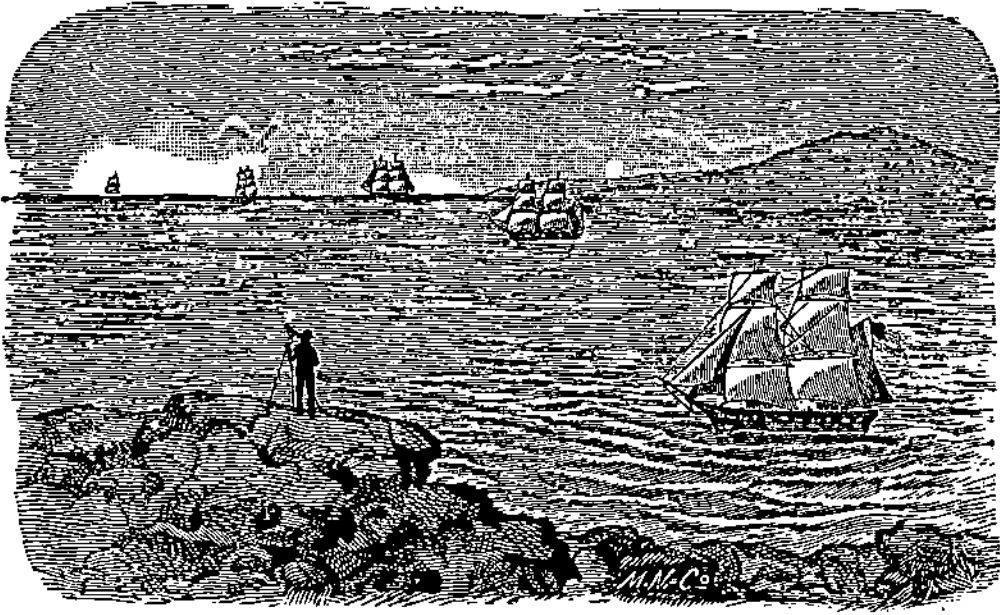


Fig. 9.

We would not like to flatly deny what Mr. Lockyer may see with his *theoretical* vision, and thousands of others who never gave the matter a *demonstrated* test. Yet, we can give our testimony as one who has been only about two years a seafaring man; and since that time our attention having been called to the practical demonstration of the matter, we have always been able to behold the *sails* at a greater distance than we could see the *masts*. If we divide a circle into 360 degrees, the usual and accepted rule, the "angle" from the parallel or vertical from the center to the circumference is the same, regardless of the diameter of the said circle; though the farther we go from the center the greater the divergency of the lines

from each other or wider the space. We make these remarks for the benefit of those who are not acquainted with geometrical terms and facts. Now, the *angle* or *diminution* of our vision, or that of the *average* eye is about the same as that of one degree, or about the same ratio or angle of a degree. To further demonstrate the theory, stand in the *middle* of a railroad track, where the track is straight for one mile, and though it be up-grade, you will find the rails appear to meet at a mile or less; this will fairly illustrate the convergency and diminution of sight.

One thing let us notice and bear in mind: The horizon line is ever on a level with the eye, as will be illustrated further on; and as we are viewing a vessel from the shore we are lifted

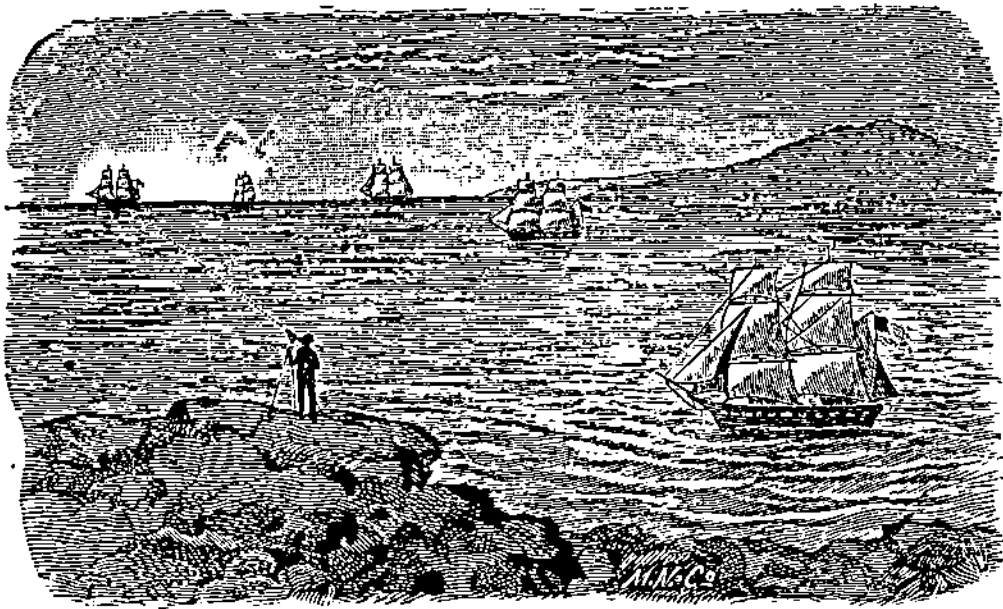


Fig. No. 10.

up from the level of the waters, and between us and the horizon line in the distance is the dark blue water, as a background covering the vessel's hull, and as the sky, when clear, is lighter than the water, it furnishes a background on which the outlines of the objects are more distinguishable than the waters which are ever below the horizon—the level of the eye.

This cut is no exaggeration of the view of the vessel on the *horizon* by the *telescope*. We have in company with others watched the vessel receding until it had *entirely disappeared*, and with a field or opera glass partially restored it to sight, and at the same time have used the telescope of forty powers which would restore the vessel to the water's edge. WERE THE EARTH A GLOBE THIS WOULD NOT BE SO! But what is the matter with Mr. Lockyer's theory? Yea, the Copernican or Newtonian entire? All say that the vessel has gone over the *hill* and disappeared. Now, what has the telescope done? Has it brought the vessel nearer to us, or has it taken us nearer to the vessel, or has it enabled us to look over the *hill* or *around the corner*? In other words, has it not simply lengthened out our vision? I prefer to believe the latter.

But one more illustration with the telescope: we go out of a starry night, we behold the seven stars; we put the telescope to our eye and within the radius of the *seven stars*—if our telescope is a powerful one—there are more stars than we are able to count, or at least we are not able to distinguish the *seven* from the multitude. Again, what have we proven by this? Simply, that we have extended our short vision to meet the focal or vanishing point of the stars whose rays lacked a few miles of reaching our vision, or that part of the earth that we inhabit. Will we still believe there is a hill between us and the vessel?

Another oft-repeated and supposed objection to the earth being a plane is the following, by Mr. Lockyer, p. 83: "Again, the roundness of the earth has been proved by navigators, who, sailing in one direction, east or west (as nearly as the different bodies of land would permit), have returned to the place from which they set out." This, to my mind, is about the weakest point that I ever observed in a *so-called* scientist; a publisher

and writer of astronomical school books. Mr. L. knows, or should know, that navigators on the great seas sail by a compass which ever points to the North Center and the South Circumference. He should know that if he stands with his back to the North Pole or center, that his face is to the *South Circumference*, no matter where on the earth or seas he may be, whether in South America or Asia. Now, in sailing or traversing the earth by a *compass, east or west*, you would keep your course by keeping at right angles with the compass, whose attraction point is ever north; and is it any more unreasonable to expect that you would arrive at the same place in going either way, if you continue on the same latitude or the same distance from the center, than it would be to expect that if you take a mechanical compass, on a flat board or square block, to scribe a circle? go either way, you arrive at the same point. The point or object that is movable simply goes around a center, regardless of the shape of that on which it moves. But should the navigator start south from *any part* of the earth, and continue his journey, what would be the terminus? It would be the everlasting bounds of ice. No navigator ever went farther, or even as far as 80° south. The magnetic current and attraction of the earth and seas is to the aerial or geographical center of the earth and seas, and *not* 4,000 miles beneath our feet. This we shall endeavor to demonstrate more fully further on.

We will return to Mr. Lockyer, on page eighty-three, article on "*Sensible Horizon.*" "On all sides of us we see a circle of land, or sea, or both, on which the sky seems to rest; this is called the *Sensible Horizon*. If we observe it from a little boat on the sea, or from a plane, this circle is small; but if we look out from the top of a ship's mast, or from a hill, we find it greatly enlarged—in fact, the higher we go the more is the horizon extended, always, however, retaining its circular

form. Now, the *sphere* is the *only figure* which, looked at from an external point, is bounded by a *circle*; and as the horizons of all places are circular, the earth is a sphere, or nearly so." We have given the entire paragraph; we shall now see how much of it is "SENSIBLE," and HOW MUCH IS NOT LOGICAL OR TRUE.

Limit of Vision and Horizon Considered.

On our next page we show a diagram, fig. 11, by which we illustrate the extent of vision. First, it will be conceded, and borne in mind, that there is a limit to the *vision*, and a limit to every light that ever shone. *Every person stands in the center of his own vision, and under his own zenith*; he can see just as far one way as he can the other, there being no obstructions; the length of the vision is varied to some extent by the conditions of the atmosphere. Now, we ask what it is that really constitutes our *horizon*? Why are we always encircled, as it were, in a spherical dome or semi-circle? Simply because our vision scribes it; it is the *end of our vision*, nothing more, nothing less. The *scope* of the vision is about 60° , the angle or diminution about one degree, as heretofore stated; therefore, the vision must have a focal or vanishing point. The horizon, then, is *formed* by the end of our vision, and the obstruction of our vision by the land or seas. And further, this "*sensible*" horizon has no more significance to the earth's being a globe or sphere, than the hands of the clock, or the scribing of a circle with the ordinary mechanic's or mathematician's compass.

Mr. L. also states that "the higher we go, the more is the horizon extended." This will also prove to be a false conception by considering the diagram fig. 9. The testimony of every aeronaut is, that as they arise from the earth, the earth seems scooped out, or concave, in the room of convex, as it should be, were Mr. Lockyer's theory true.

We will now start with the man in the balloon, fig. 11. His horizon is represented by the dotted line from the balloon to A and 6 is his zenith; he rises to 2 on the vertical line, the length of his vision is just the same; his horizon is E and it has

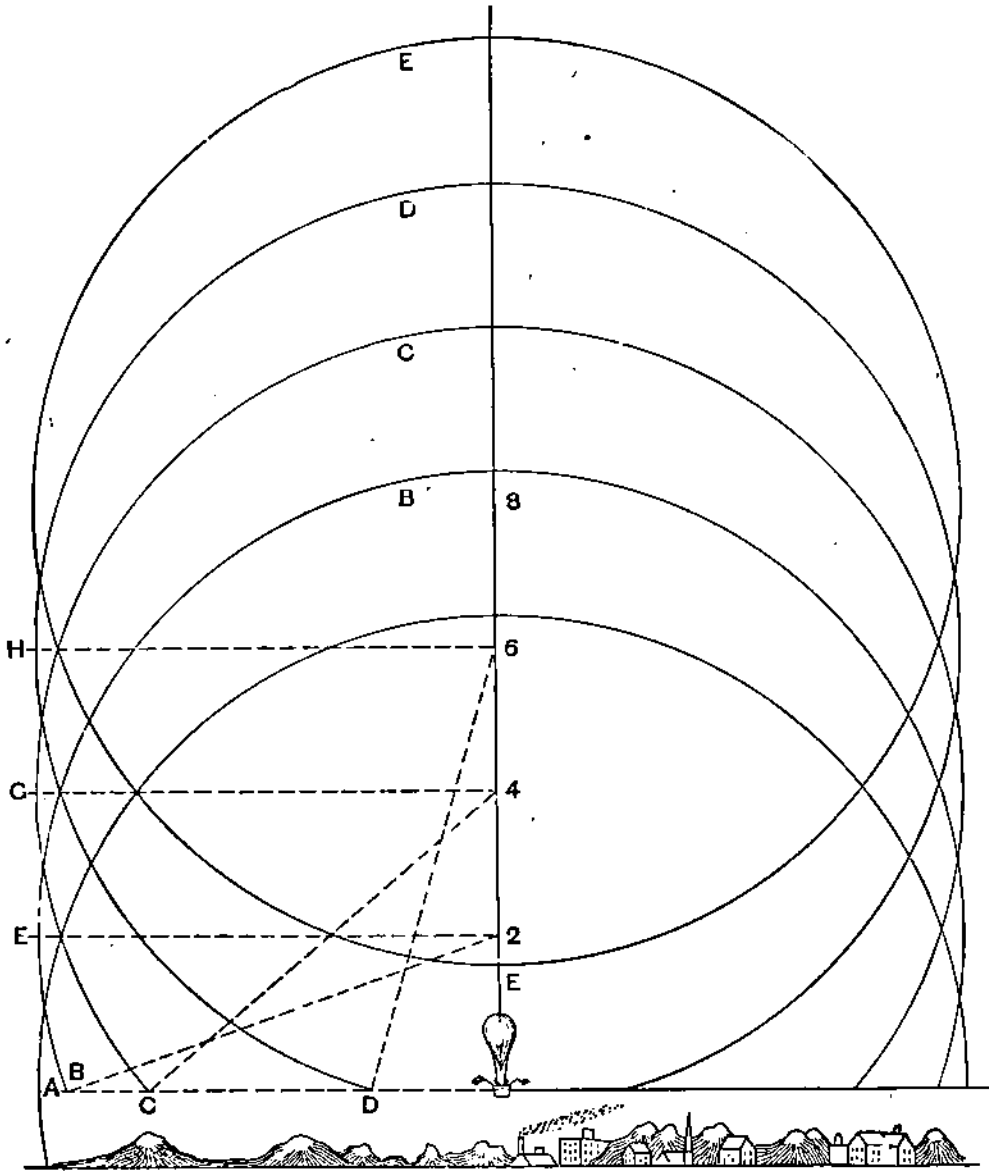


Fig. 11.

drawn in to B; he arises to 4, his horizon is G, and his sight or original horizon has drawn in to the junction of C and A; he next arises to 6; his horizon is H, his zenith is D; his horizon is H, and his original horizon has drawn in to the junction of D A. Now, would the atmosphere admit of the possibility of ascending to 8, he would be out of sight of the earth; his

zenith would be the same distance as ever, yet there would be nothing to distinguish his horizon, in fact, he now has none, but he is in the radial center of his vision as usual, with sky *all around* him.

But a few words in regard to seeing objects "better the higher we go." This is true to a *limited extent only*. As we rise from the earth we change the angle of our vision relative to things on earth or sea, but we see no farther, unless by rising we get above objects that obstruct. The horizon is ever the *same* distance to the *same* unaided eye, in all places, wherever you are, and under the same conditions of atmosphere.

Every individual who is blessed with natural vision, has, so to speak, an *orbit* to that vision; that orbit is not an eclipse, but a perfect sphere, and so is every light that ever shone. It will be interesting to observe the testimony of a few noted aeronauts on this subject, believing that those who have had demonstrated *optical views* of the earth when at an altitude above the clouds, would be as good judges of the appearance of the earth beneath them, as those who have sat in their official chair and written a flowery essay upon the appearance of the heavens and the earth. Doubtless, this may be to the satisfaction of themselves and our school-boy days, but all this is not quite satisfactory to him who requires demonstrated evidence of these things.

The Apparent Concavity of the Earth as Seen From a Balloon.

"A perfectly formed circle encompassed the visible planisphere beneath, or rather the concave-sphere it might now be called, for I had attained a height from which the earth assumed a regularly hollowed or concave appearance—an optical allusion which increases as you recede from it. At the greatest elevation I attained, which was about a mile and a half, the appearance of the world around me assumed a shape

or form like that which is made by placing two watch glasses together by their edges, the balloon apparently in the central cavity all the time of its flight at the elevation." — Wise's Aeronautics.

"Another curious effect of the aërial ascent was that the earth, when we are at our greatest altitude, positively appeared *concave*, looking like a huge dark bowl, rather than the convex sphere such as we would naturally expect to see. . . . The horizon always appears to be *on a level with our eye*, and seems to *rise as we rise*, until at length the elevation of the circular boundary line of the sight becomes so marked that the earth assumes the anomalous appearance, as we have said, of a *concave* rather than a convex body." — Mahew's Great World of London.

"The chief peculiarity of a view from a balloon at a considerable elevation, was the altitude of the horizon, which remained practically *on a level with the eye*, at an elevation of two miles, causing the surface of the earth to appear *concave*, instead of *convex*, and to recede during the rapid ascent, whilst the horizon and the balloon seemed to be stationary." — London Journal, July 18th, 1857.

Mr. Elliot, an American aeronaut, in a letter giving an account of his ascension from Baltimore, thus speaks of the appearance of the earth from a balloon:

"I don't know that I ever hinted heretofore that the aeronaut may well be the most sceptical man about the rotundity of the earth. Philosophy imposes the truth upon us; but the view of the earth from the elevation of the balloon is that of an immense terrestrial basin, the deeper part of which is that directly under one's feet. As we ascend, the earth beneath us seems to recede — actually to sink away, while the horizon gradually and gracefully lifts a diversified slope, stretching

away farther and farther to a line that, at the highest elevation, seems to close with the sky. Thus, upon a clear day, the aeronaut feels as if suspended at about an equal distance between the vast blue oceanic concave above the equally expanded terrestrial basin below."

During the important balloon ascension, recently made for scientific purposes, by Mr. Coxwell and Mr. Glaisher, of the Royal Observatory, Greenwich, the same phenomenon was observed.

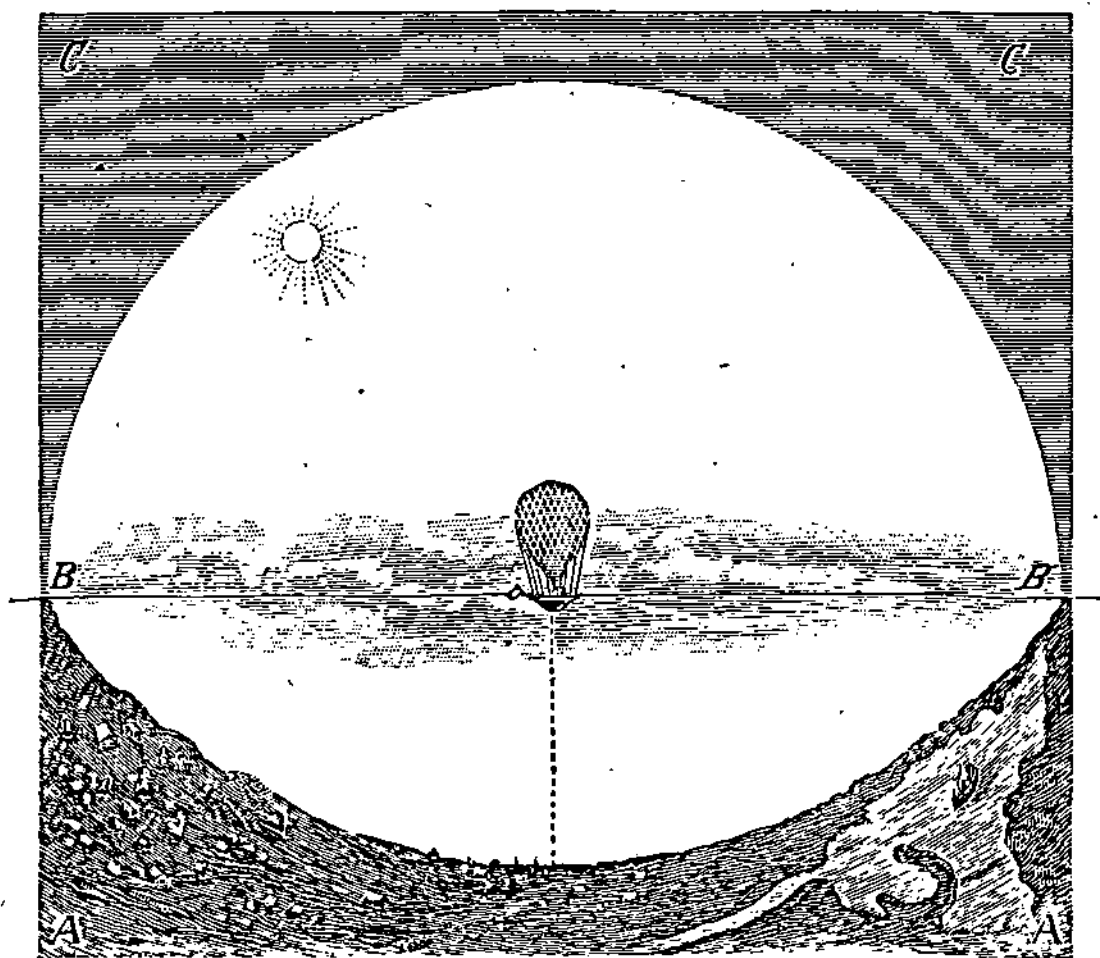


Fig. 12.

"The horizon always appeared on a level with the car."
— See Mr. Glaisher's report, in *Leisure Hour* for October 11 1862.

"The plane of the earth offers another delusion to the

traveler in the air, to whom it appears as a *concave* surface, and who surveys the line of the horizon as an unknown circle, rising up, in relation to the hollow of the concave hemisphere, like the rim of a shallow inverted watch glass, to the height of the eye of the observer, how high soever he may be, the blue atmosphere above closing over it like the corresponding hemisphere reversed."—Glaisher's report, in *Leisure Hour*, for May 21, 1862. ❧

The appearance referred to in the several foregoing extracts is represented in the foregoing diagram; and with the exception of the cuts, which are our own, may be found in "Zetetic Astronomy," by Parallax, pages 36-38:

The surface of the earth A A appears to rise up to the level of the observer in the car of the balloon and at the same time, the sky C C seems to descend and to meet the earth at the horizon B B.

The above is the universal testimony of all aeronauts we have ever read; and we have several others. But we will not annoy with over-abundance of testimony, but will stop by asking the reader how he thinks the above statements harmonize with Mr. Lockyer's *theoretical* vision?

But we have not yet got ready to abandon this balloon ascension; it furnishes good evidence in regard to the *convexity question*. We have stopped in the midst of the subject and made a correct diagram, that we might illustrate the matter with certainty. In the following scale, the one-fiftieth (1-50) of an inch, represents a mile; both in altitude and circumference, relative to a globe.

Let A O o represent the prime vertical of a globe; D D' represents a right angle from the vertical. The man in the balloon has ascended from D on the vertical line, two miles, to the arrow point 1. In order to look over the earth,

the line of sight from the balloon would strike the earth at arrow points 5 and 3; therefore, the horizon would be just 170 miles distant, and in the place of being on the level with the eye of the observer in the balloon, from arrow points 1—2, as previously stated by the aeronauts. We find Mr. Lockyer's "*Sensible Horizon*," by looking on the line of E—E', arrow points 5 and 3, 19,266 feet 8 inches below the starting

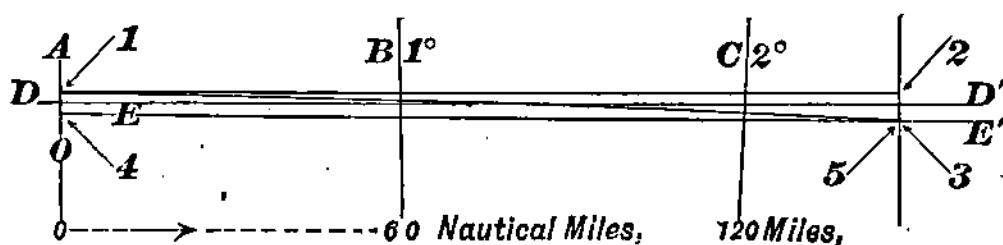


Fig. 13.

point at D—D', and about *five* nautical miles; (a nautical mile is 6,075 feet); therefore, we multiply 6,075x5 and it gives 30,375 feet as the actual difference between the actual observers, and the *Ideal Vision* of a *Sensible Horizon*.

In view of the above facts and hundreds of others that we have examined and might be brought forward, we are forced to say that so far as the earth and seas are concerned, the convexity sought for cannot be found; for lo! *it does not exist*.

A few more thoughts may be worthy of consideration in regard to the law of perspective. It will be obvious to the thoughtful mind that *space* diminishes with the objects as they recede in distance. The two rows of lamp lights in some of our long streets in Chicago and other cities, will appear to converge at a distance of two miles or less, owing to the width of the street. Now, we are apt to forget that this diminution of our vision decreases at the same ratio *vertically* as it does *horizontally*. The closer two objects, or more, are to each other,

the sooner they become *one* in appearance as they recede in distance. Again, let us remember that the vessel's hull when at sea is on and a part in the water; which, together with the focal and vanishing point of vision, constitutes our horizon line, and is the absolute termination of our vision in that direction; therefore, just as fast as that body (the hull of the vessel) continues to recede, just so fast that hull will continue, little by little, to disappear—always the lower portions of the vessel first. Let diagram fig. 14 illustrate:

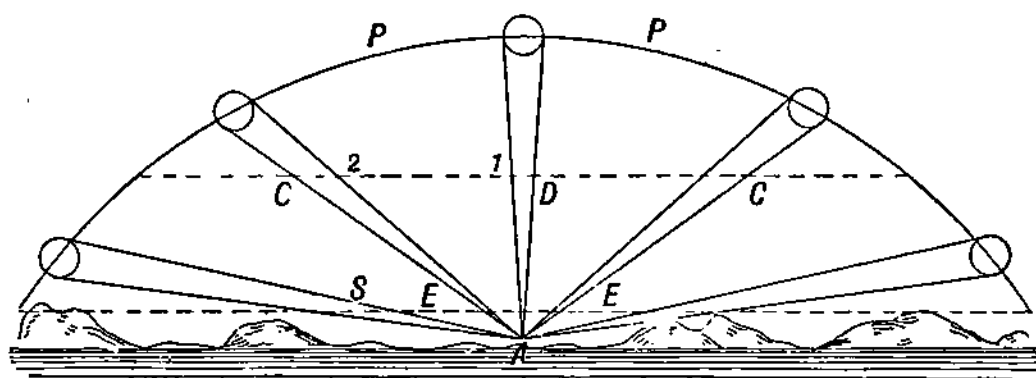


Fig. 14.

Let A represent the surface of the earth, and E E the lower strata of atmosphere; C D C the upper strata, and P P the arc of the heavens. The observer at A is in the center of his own vision, and he sees the rising and setting sun's rays, obliquely, and through a greater amount of atmosphere at S E E than at 1 and 2, or at any other points on the diagram.

However, there are conditions of atmosphere that must be taken into consideration with these thoughts as well as the conditions of the optical vision of the beholder. At the earth or on the sea the air is more aqueous; particles of vapor in solution are in component parts of greater quantity than at a high elevation. This is one of the reasons why an object is to be seen at a greater distance from our high latitudes, as in mountainous

countries, than they otherwise would be. In all very high altitudes sight is conveyed to a greater distance, but *sound* much less. For instance, Pike's Peak which is 14,147 feet above the level of the sea, is seen from Denver or that vicinity, the latter of which is some eight or nine thousand feet above the level of the sea, and according to the railroad time and distance tables, it is eighty-two miles from Pike's Peak. Yet, we are told by travelers on those railroads that Pike's Peak is seen at a distance 130 to 150 miles from other very high peaks, and this is reasonable with the law of perspective when the different altitudes are taken into consideration with the rarefied atmosphere through which they look.

Bayard Taylor gives an account of an ascent made in some of the mountains of Europe, by himself and escort, to an altitude of so little or light an atmosphere, "that it was," says he, "with *difficulty* that we could hear the report of a *revolver fifteen feet*; at that demonstration we made haste our retreat for blood oozed from the pores of the skin, at the lips and nostrils."

Again, we are asked, why does the sun look so much larger at sunrise or sunset, than he does at noon? If he is ever the same distance from the earth, why should he not appear the same size, or even less? The foregoing will explain.

The Horizon Line, by Dr. Wm. Hobotham.

"The author has seen and tested this apparent rising of the water and the sea horizon to the level of the eye, and to an eye-line at right angles to a plumb line, from many different places—the high ground near the race course at Brighton in Sussex; from the several hills in the Isle of Wight; various places near Plymouth, looking towards the Eddystone lighthouse; the 'Steep Holm' in the Bristol Channel; the Hill of

Howth, and 'Ireland's Eye,' near Dublin; various parts of the Isle of Man; 'Arthur's Seat,' near Edinburgh; the cliffs at Tynemouth; the rocks at Cromer, in Norfolk; from the top of Nelson's monument, at Great Yarmouth, and from many other elevated positions. But in Ireland, in Scotland, and in several parts of England, he has been challenged by surveyors to make use of the theodolite, or ordinary 'spirit level,' to test appearance of the horizon. It was affirmed that, through this instrument, when 'leveled,' the horizon always appeared *below the cross-hair*, as shown in fig. 15, C C the cross-hair and H the horizon.

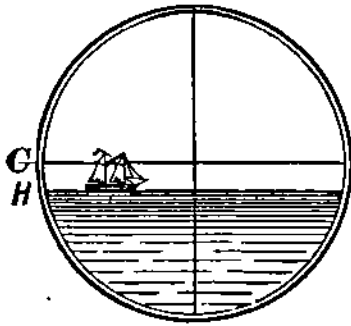


Fig. 15.

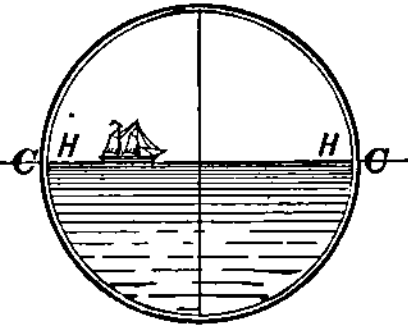


Fig. 16.

"In every instance when the experiment was tried, this appearance was found to exist; but it was noticed that different instruments gave *different degrees* of horizontal depression below the cross-hair. The author saw at once that this peculiarity depended upon the construction and adjustment of the instruments. He ascertained that in those of the very best construction and of the most perfect adjustment, called technically 'collimation' there was a slight divergence of the rays of light from the axis of the eye, on passing through the several glasses of the theodolite. He therefore obtained an iron tube about eighteen inches in length, one end was closed, except a very small aperture in the center, and at the other end cross-hairs were

fixed. A spirit level was then attached, and the whole carefully adjusted. On directing it, from considerable elevation towards the sea, and looking through the small aperture at one end, the cross-hair at the opposite end was seen to cut or to fall *close to the horizon*, as shown at fig. 16. (H H.) This has been tried in various places, and at different altitudes, and always with the same result; showing clearly that the horizon is visible below the cross-hair of an ordinary leveling instrument and is the result of *refraction* from looking through the various glasses of the telescope; for on looking through an instrument in every respect the same in construction, except being free from lenses, a different result is observed, and one precisely the same as that seen from a balloon from any promontory, and especially in the experiment at Brighton."

In order to verify the above statement, the author of this book procured a surveyor's leveling instrument of Mr. Henry Lyon, of Buffalo, and then procured permission of the city officers, or those in charge of the City Hall, to ascend to the roof, the hall being one of the highest buildings in Buffalo; the top of which is over 150 feet above the level of the lake (Lake Erie at the mouth of Niagara River) and affording a fine view of the city and of Lake Erie to the utmost extent of the vision. Here upon the roof (it being a flat roof or nearly so) I placed and adjusted the instrument and swung it to the sea, and observed a space of about one-eighth ($\frac{1}{8}$) of an inch between the horizontal line of the instrument and the horizon proper, as shown in fig. 15. I next swung the line of sight to the Canada shore, and found the line cut the tops of some of the *very highest trees*. Knowing that the Canada shore, at the point to which I directed the leveling instrument, was fully equal, if not higher than the ground on which the City Hall stood, I felt pretty sure that the instrument was in good adjustment; because I was looking across a

body of water to a point of land, some ten miles or more distant. Having previously been upon, and past the said point of land by water, I could judge approximately as to its relative height above the water.

I next went down from the City Hall roof and went to the foot of Georgia street, about as near the level of the water as I could conveniently get, and there adjusted the instrument a second time. When leveled I found that the cross-hair or horizontal line of the level struck the banks of the lake at intervals along the Canada shore to the terminus of the point of land before mentioned, but, as I swung the level to the horizon line formed by the sea and sky, I could not distinguish any difference in the space existing between the cross-line and the horizon from near the water's edge, than that carefully observed at the top of the City Hall.

This not only confirms and agrees with Dr. Hobotham's statements, but those of the writer, illustrated by fig. 11 on page 281, and in fact, every other demonstration made. Next, in order to establish, as well as to put this horizon line question beyond the shadow of a doubt, we procured of the mathematical instrument maker a cited and graduated level, having *no lens*. We then repaired to the lake shore near the city water works, there being a bluff at that point of about sixty feet above the lake and harbor. Here we set our level and found it to cite exactly on the horizon line at sea. We next entered the city water works—being connected therewith an observatory of some fifty feet more elevation. From this elevation, at last, to speak safely, we were 100 feet above the water level; and here we find the level, when accurately adjusted, to point directly on the horizon line. I think that the majority of scientific engineers and coast surveyors understand this rise of the horizon line; but I am surprised to find so few, if ever an one

inland surveyor, that *really understood* that the center of his vision, both vertical and horizontal, was the axis of his eye. And yet, I am more surprised to find such men as Lockyer, who are considered scientific authority, saying: "Now the sphere is *the only figure* which looked at *from any point* is bounded by a circle [and notice his illogical conclusion], and as the horizons of all places are circular, the earth is a sphere." See Lockyer's *Astronomy*, p 83. parag. 161.

These comparative experiments cannot fail to satisfy any unbiased observer, that in every leveling instrument *where lenses are employed*, there is, of necessity, more or less divergence of the line of sight from the true or normal axis, and that however small the amount—perhaps inappreciable in short lengths of observation—it is considerable in distances of several miles. Every scientific surveyor of experience is fully aware of this, and other peculiarities in all such instruments, and is always ready to make allowances for them in important surveys. As a still further proof of this behavior of the telescope or leveling instrument, the following simple experiment may be tried: Select a piece of ground—a terrace, promenade, line of railway, or embankment, which shall be *perfectly horizontal*, for say; five hundred yards. Let a signal staff, five feet high, be erected at one end, and a theodolite or spirit level fixed and carefully adjusted to exactly the same altitude at the other end. The top of the signal will then be seen at a little *below the cross-hair* although it has the *same actual altitude*, and stands *upon the same horizontal foundation*. If the position of the signal staff and the spirit level be then reversed, the same result will follow.

Another proof will be found in the following experiment: Select any promontory, pier, light-house gallery, or small island, and, at a considerable altitude, place a smooth block of

wood or stone of any magnitude; let this be "leveled." If then, the observer will place his eye close to the block of wood, and look along its surface towards the sea, he will find that the line of sight will *touch the distant horizon*. Now, let any number of spirit levels or theodolites be properly placed, and accurately adjusted, and it will be found that, in every one of them, the same sea horizon will appear in the field of view considerably *below* the cross-hair; thus proving that the telescopic instrumental readings are not the same as those of the naked eye.

Dr. Hobotham continues:

"In a work entitled 'A Treatise on Mathematical Instruments,' by J. F. Heather, M. A., of the Royal Military College, Woolwick, published by Weale, High Holborn, London, elaborate directions are given for examining, correcting and adjusting the collimation, etc., and at page 103 of the above-named work, these directions are concluded by the following words: 'The instrument will now be in complete practical adjustment for any distance not exceeding ten chains (220 yards), the maximum error being only 1-1000 of a foot.'

"At this stage of the enquiry two distinct questions naturally arise. First, if the earth is a plane, why does the sea at all times appear to arise to the axis of the eye? And secondly, would not the appearance exist if the earth were a globe? It is a simple fact that two lines running parallel for a considerable distance will, to an observer placed between them at one end, appear to converge or come together at the other end. The top and bottom, and sides of a long room, or an equally bored tunnel, will afford a good example of this appearance; but perhaps a still better illustration is given by the two metallic lines of a long portion of any railway.

"In fig. 17, let A B and C D represent the two lines of a straight portion of horizontal railway. If an observer be

placed at G he will see the two lines apparently meeting each other towards H, from the following cause: Let G represent the eye, looking first, as far as figures 1 and 2; the space between 1 and 2 will then be seen by the eye at G, under the angle 1 G 2. On looking as far as figures 3 and 4 the space between 3 and 4 will be seen under the diminishing angle 3 G 4. Again, on looking forward to the points 5 and 6, the

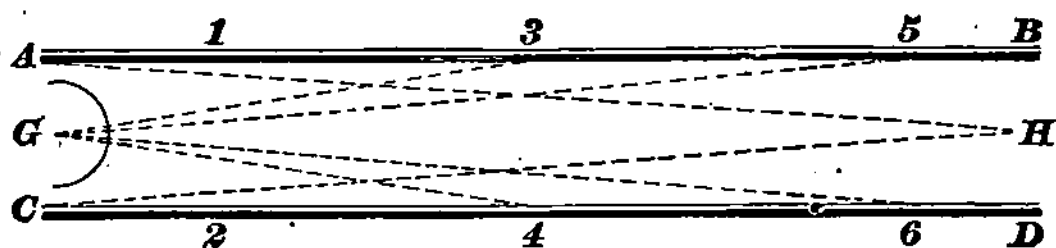


Fig. 17.

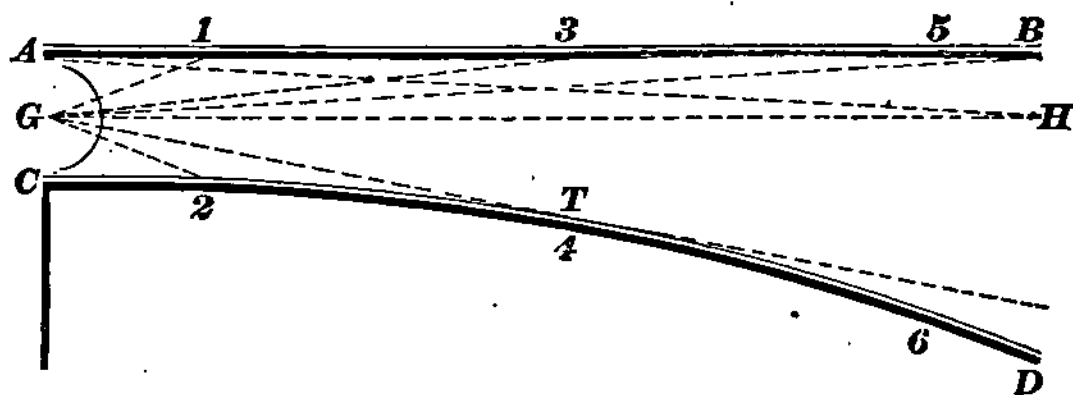


Fig. 18.

space between the rails would be represented by the angle 5 G 6; and, as will at once be seen, the greater the distance observed, the more acute the angle at the eye, and therefore the nearer together will the rails appear. Now, if on these rails should be an arc of a circle and diverge from the other, as in

the diagram fig. 18, it is evident that the effect upon the eye at G would be different to that shown by the diagram fig. 17. The line G 4 would become a tangent to the arc C G, and could never approach the line G H nearer than the point T. The same may be said of lines drawn to 6, opposite 5, and to all greater distances — none could rise higher than the tangent point T. Hence, allowing A B to represent the sky and C D the surface of the water of a globe, it is evident that A B could appear to decline or come down to the point H, *practically* to a level with the eye at G; but that C D could never, by the operation of any known law of optics, *rise to the line of G H*, and therefore, any observation made upon a globular surface, could not possibly produce the effect observed from a balloon, or in any experiment like that represented in figs. 12 and 13. (The man in the balloon.)

“From the foregoing details the following arguments may be constructed:

a—Right lines, running parallel with each other appear to approach in distance.

b—The eye-line, and the surface of the earth and sky run parallel with each other.

c—*Ergo*; the earth and sky appear to approach in the distance.

d—Lines which appear to approach in the distance are parallel lines.

e—The surface of the earth appears to approach the eye-line.

f—*Ergo*, the surface of the earth is parallel with the eye-line.

g—The eye-line is a right line.

h—The surface of the earth is parallel or equi-distant.

i—Ergo, the surface of the earth is a *right line*—a plane.
[Not a globe, nor sphere or speroid.]

The Sun's Motion, Concentric With the Polar Center.

“As the earth has been proved to be fixed (See cut fig. 3), the motion of the sun is a visible reality. If it be observed from any latitude a few degrees north of the line called the ‘Tropic of Cancer,’ and for any period before or after the time of southing, or passing the meridian, it will be seen to describe an arc of a circle. The following simple experiment will be interesting as demonstrating the fact that the sun's path is concentric with the center of the earth's surface: Let the observer take his stand a few minutes before sunrise (in the month of June, or any of the summer months will be better than winter, as the results will be more striking), on some elevated point, where he can see a clear horizon line east and west. Let him draw a line due north and south; and a second line due east and west, across the first. Now stand with his back to the north. Being thus at his post and ready for observation, let him watch carefully for the sun's first appearance above the horizon, and he will find that the point where the sun is first observed is considerably to the north of east, or at the line drawn at right angles to north and south. If he will continue to watch the sun's progress until noon, it will be seen to ascend in a curve southwards until it reaches the meridian; and thence to descend in a westerly curve until it arrives at the horizon and set considerable to the north of due west, as shown in the following diagram, fig. 19. An object which moves in an arc of a circle and returns to a given point in a given time, as the sun does to the meridian, must, of necessity, have completed a circular path in the twenty-four hours which constitute a Solar day.

Noonday Sun.

"To place the matter beyond doubt, the observations of Arctic navigators may be referred to. Capt. Parry and several of his officers, on ascending high land near the Arctic circle repeatedly saw, for twenty-four hours together, the sun describing a circle upon the southern horizon. Capt. Beechy writes:

" 'Few of us have ever seen the sun at midnight, and this night happening to be particularly clear, his broad red disk, curiously distorted by refraction, and sweeping majestically along the *northern horizon*, was an object of imposing grandeur, which riveted to the deck some of our crew who would perhaps have beheld with indifference the less imposing effect of the icebergs. The rays were too oblique to illuminate more than the irregularities of the flows of the ice, and falling thus

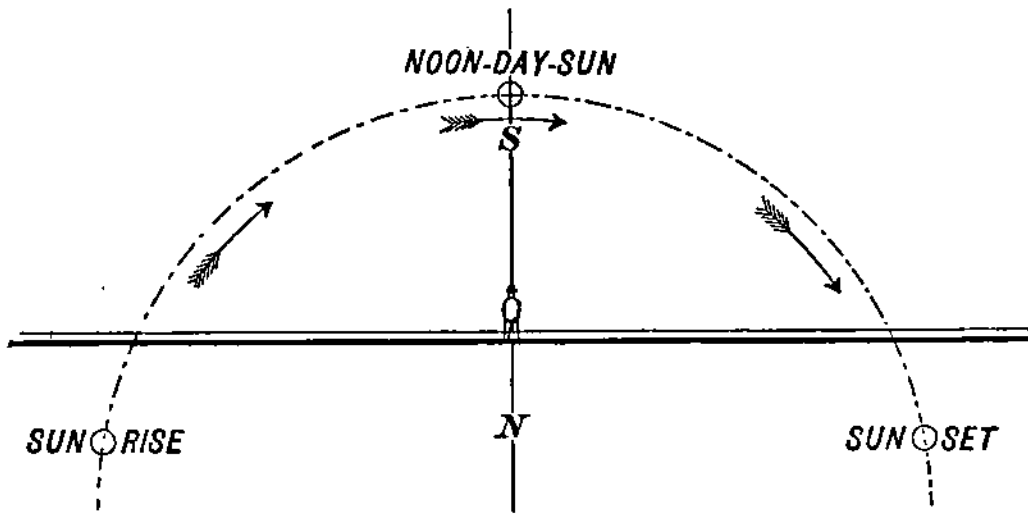


Fig. 19.

partially on the grotesque shapes, either really assumed by ice or distorted by the unequalled refraction of the atmosphere, so betrayed the imagination that it required no great exertion of fancy to trace in various directions architectural edifices, grottos and caves, here and there, glittering as if with precious metals.'

"In July, 1865, Mr. Campbell, United States Minister to

Norway, with a party of American gentlemen went far enough north to see the sun at midnight. It was 69 degrees north latitude, and they ascended a cliff 1000 feet above the Artic Sea. The scene is thus described:

“ ‘It was late, but still sunlight. The Artic Ocean stretched away in silent vastness at our feet; the sound of the waves scarcely reached our airy lookout. Away in the *north* the huge old sun swung low along the horizon like the slow beat of the tall clock in our grandfathers’ parlor corner. We all stood silently looking at our watches; when both hands stood together at twelve, midnight, the full round orb hung triumphantly above the wave—a bridge of gold running due north spangled the waters between us and him. There he shone in silent majesty which knew no setting. We involuntarily took off our hats—no word was said. Combine the most brilliant sunrise you ever saw, and its beauties will pall before the gorgeous coloring which lit up the ocean, heaven and mountains. In half an hour the sun had swung up perceptibly on its beat, the colors had changed to those of morning. A fresh breeze had rippled over the florid sea; one songster after another piped out of the grove behind us—we had slid in to another day.’ ” Parallax’s Earth not a Globe, pps. 105–107.

A Midnight Polar Sun.

Theories are of no certain character. He who builds his hopes upon a hypothesis, because of its pleasing nature and relative to his fairy dreams, as did the Copernican astronomers, is sure, sooner or later, to find his foundation is but sinking sand, and his hope that of the traveler’s mirage in a desert land. Honesty of thought is to look truth squarely in the face, without fear of its contradicting itself, or destroying our preconceived opinions. Then, to think honestly, is to think freely,

and allow not the desire to run away with the thought, nor master that thought based on an axiom. He who does this, has predetermined what he shall believe. The amount of evidence, and weight of argument on such a mind, may be justly compared to water poured upon a duck's back.

Notwithstanding the existing fact, of the varied minds of men, we will proceed with our demonstrated method of proving our way as we go. First: It is a well-known fact by all northern navigators, that the sun can be seen at midnight, from the northern portion of Hudson's Bay, Behring Strait, and the southern portion of Greenland, and all of those points south of the Arctic circle. The latter is undeniable existing facts, regardless of the shape of the earth. Second: Another *undeniable* existing fact to thousands of people on land and sea, is this: The sun never reaches a latitude north of the Equator, exceeding $23^{\circ} 30'$. The Tropic of Cancer is well known to be the northern limit of the sun's vertical position, from the 21st to the 22d of June. Third: It is well known by all nautical almanac makers of our Government, and others, that *just* 45° from the *sun's daily path* he is seen at *noon*, at an altitude in the arc of the heavens of 45° (to the child we would say, explain *half-way* between the horizon and the zenith.)

This, then, will give a geometrical explanation for squaring our circle in order to get the relative position of the sun from the earth. And further, how the sun can be seen at angle of 45° altitude from either side of it at all times, wherever 45° distance places the beholder, is more than I am able to tell, and I have never been able to even find an intelligent person to attempt the task. This, however, will be more fully set forth in the next chapter.

In fig. 20 following let the dotted circle A A represent the sun's path around the earth horizontally, and concentric to the

north center N, 90, but never rising any above the $23\frac{1}{2}^{\circ}$ —its position on the diagram, which is known to be the case by all people living on the Tropic of Cancer, it passing through India, Arabia, Egypt, Africa, Bahama Isles, Mexico and many islands of the Pacific Ocean and Chinese Empire.

Now, let us examine the corroborative testimony of Capt. Parry and his several officers as given under fig. 19, and especially the United States Minister to Norway, Mr. Campbell, who took their position 1000 feet above the Arctic sea, in 69° north latitude, in the month of July, after the sun had commenced to recede from its extreme northern limit.

The following diagram, fig. 20, will more fully set forth the matter in its true light:

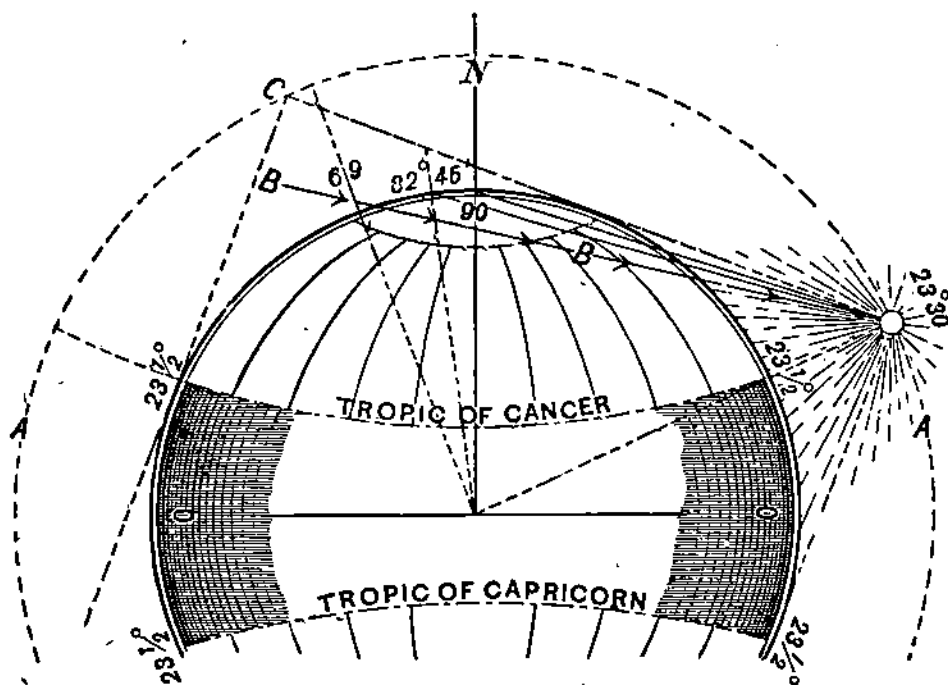


Fig. 20.

First, let us take our position on the "1000" feet elevation on the dotted line 69° arc and arrow line B B. We now find that we have a body of earth and water, over 1000 miles above the line of sight B B, and more than the radius or half the diameter of their supposed globe. But the nearest approach to

the center, ever made by man who returned to tell the tale, was Sir Edward Parry, who, with open boats, advanced in toward the North to the latitude of $82^{\circ} 45'$, or to the proximity of 435 miles from the North Center, commonly called the Pole. The dotted line at $82^{\circ} 45'$ is the relative position of Sir Edward Parry, and we find the line of sight would pass through a body of the earth equal to about 3,000 miles or more. But suppose that he were at the very center (and they claim it a great basin scooped out to a depth of some ten miles, but so much the worse for their theory—those who have the truth can afford to be liberal), he would have to reach an elevation on his *supposed Pole of more than ten miles* to the line of C in order to see the sun even on the horizon. Thus we see again and again the inevitable results of a hypothetical foundation.

CHAPTER XIV.

The Sun's Altitude. What is the Truth ?

WE can reason intelligently only from what we know, and we are all dependent on universal history of all past time, for much of our present knowledge is procured from the experience of the ancients. When secular and profane history corroborates prophecy, both become to us facts. History tells us that the Ancient Greeks believed the sun to be about thirty miles distant above the earth. In the early days of Copernicus, who was born at Thorn, on the Vistula, February 19, 1473, it was believed to be about one thousand miles. During Copernicus' lifetime it advanced to three millions of miles. Sir Isaac Newton had it fifty-four millions. In 1754 it was taught to be between eighty-one and eighty-two millions. (A million or two did not make much difference, anyway.) To-day it is claimed, by some, to be ninety-one, and by others one hundred million miles distant from the earth, and its rays of light to extend two hundred millions of miles, and its light to travel that distance in one second of time!

To-day, the man that would presume to show a logical solution of these paganistical conglomerations of ideas, by a plain, geometrical process of logical reasoning, is pounced upon by news venders and editors, using all sorts of epithets to show his *would-be wise* indignation for the one who dare to attack, what the editor styles "a long-established, beyond the shadow of, doubt and impeachable facts," and warns his "unsuspecting readers against such nonsense, and whimsical attempts to mislead those not informed," etc.

We have no time to waste with those who find it more satisfactory to revile with sarcasm than to prove our position incorrect, but will invite all who feel so disposed to follow us through our two articles which bring to light the consistent or inconsistent teachings of the principles of modern science as compared with the most ancient in regard to the subject in question.

How shall we arrive at the truth concerning these statements and conflicting ideas? Ans. That which can be physically and mathematically demonstrated, or we will say in synonymous terms, that which can be *geometrically* and *mechanically* proven. The architect or the inventor having conceived in his mind a structure, is not positive of that structure meeting his mind in all points until he has obtained a draught on a proper and convenient scale, by which he measures all its parts and considers its relations, the one point with all others; and a little further, if you please, a model, a miniature, or a standard representation, is to him the *demonstrated truth* or a *type* of the *truth*. One more style of truth we would use in our argument, and that is axiomatic, self-evident, and is just as infallibly *the truth* as it is, that the sun rose or set yesterday. We will ask the reader to be patient with us, and go slow, and we will try to use no more words than is necessary to make our argument conclusive, and safe to follow and understand, whether you believe or not. The evidence above mentioned we will now bring forward. First, we will present the former, the mechanical, and say to you behold a miniature drawing or diagram of the earth in figure 21. The first and inner circle is the representation of a globe. By squaring this globe at the four cardinal points, we produce an angle of 45° and establish a double quadrant at every corner. We also establish the latitude of 45° A A A A north and south, which are

co-equal in distance from the north, south and Equator B B B B. Right here let it be borne in mind that these lines and angles or degrees all bear the same relation to each other and relative proportions on this scale, as they would though the drawing were many times larger, or as large as the supposed globe itself.

And now for our universal, axiomatic fact: Everybody knows (that knows what an almanac teaches) that the sun is vertical, plumb over the Equator, B B, on the 21st and 22nd days of September and March, respectively; one day on one side of the north center, and the next day on the other. The people living on the Equator certainly know the latter to be true. Now, whether the earth be a globe or a plane, one thing more we know: The people living at Ottawa, Canada, which

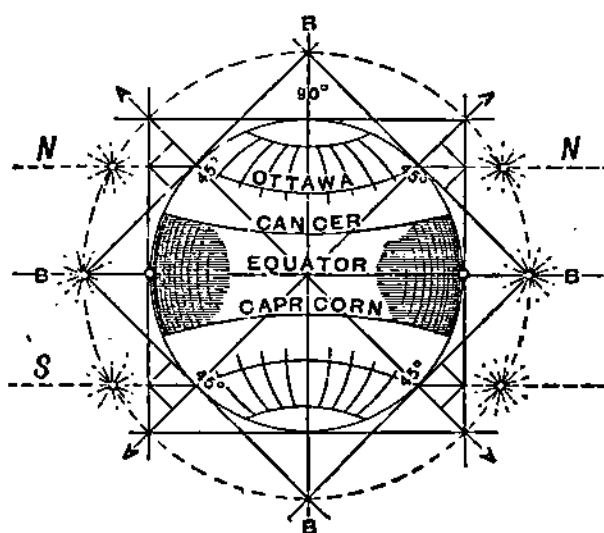


Fig. 21.

is 45° north latitude, and the people in South America at 45° south latitude, see the sun at 12 o'clock noon, at one and the same time that it is vertical on the Equator. Where do they see it, and at what angle in the heavens? Answer: 45° altitude, which is, to be plain to all, half-way between the

horizon and the zenith (plumb overhead.)

Now, in all fairness and honesty to all scientific intelligence and mechanical skill, we declare this drawing or diagram, to be according to the so-called science of the globular theory, and risk our small reputation before the world with the declaration. Now, if from B B B B is the base or horizontal lines from the four cardinal points or sides, then certainly A A A A, over the 45° is the vertical or plumb line, it is the zenith

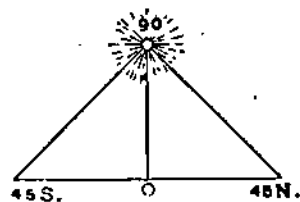
to the locality of the "four forty-fives." From this construction it will readily be seen, by every person who has any mechanism in their head. If they will notice, the small angles of 45° at the "forty-fives" (call them quadrants if you please), simply produce co-equal parallel lines to each other, and dotted lines N B S. Let us follow this matter a little further—don't get tired *too* quick: While the people at the Equator B see the sun over their head at noon, where do the people at 45° north see the sun? Answer: On their own base or horizon line, just setting; that is, providing that each sees the same sun? Next, where do the people at 45° south see the sun? Answer: On their own base line, just rising! Again, as there are just twenty-four hours contained in a complete revolution of the sun, how many hours of sun would the people have while the sun would be going from A to A, or B to B? Answer: Six, no more, no less!

In view of this demonstrated fact, namely, that if the sun is seen at an angle of 45° north and 45° south at the same time vertical on the Equator, then there must be three suns. But it is said by some that the sun is much larger than the earth, and that the people on one side see one edge, and the people on the opposite see the other, etc. Yes! Let us see: Again, the globular scientists claim the sun to be 800,000 miles in diameter, and we must hold it at the angle of 45° from the two co-equal latitudes, for there is where they both see it, and there the visions or lines of sight cross, and there it is; *there is the center!* But hold! the lower limb of the sun is hanging just 400,000 miles below that center. It would wipe the earth out of existence in its first revolution. With these aforesaid lines running parallel and 3,000 miles apart, the sun only covering an angle of a little over half a degree or thirty-five miles, all told. You might look on the 45° N. latitude and 45° S. latitude, at an

angle of 45° for the sun to all eternity, it could not be sun while the sun was on the Equator. It is presumption in the extreme. We have placed the *sun* just where the squaring of the circle demands it must be, and still be at 45° altitude where it is known that it is. Now we know of no other principle that will carry out the problem and meet the conditions; and certain it is, that this does not meet the well-known requirements and facts in the case. It is also evident, inasmuch as we have seen by the above demonstration, that the sun could not be seen simultaneously at the three places by an observer on a globe, that *this Earth is not a Globe*.

The only conditions by which the sun can be seen from the localities named (or any other locality 45° from the actual locality of the sun's daily path), is given in an article written by the author of this book for the *Buffalo Times*, and published November 16, 1890, which we give in part below:

We present another diagram, fig. 22. This is simply two quadrants or right angles whose bases 45° S. and 45° N. are equal to the vertical or plumb line (o) which represents the Equator. The two hypotenuses (longest lines of the angles) whose bases respectively at 45° south latitude and 45° north latitude when raised at an elevation of 45° of the arc of the heavens, each determine the sun at that point 90° . We now have the matter in a nutshell. It is a nail in a sure place. It is too plain not to be understood, that all who know the diameter of the Equator (the sun's path or the diameter of the "supposed globe"), can know the distance from Ottawa, Canada, 45° north latitude to the Equator, and all do know that 45° latitude and 45° altitude, or in other words, the base and vertical are equal.



While we are aware of the many phenomena that are

supposed to be explained to be derogatory to the "Zetetic" or the earth a plane, we know of no principle or law, and believe that there is none known to man that will exclude or supersede the principle of the quadrant or right angle whose base and



vertical are equal. When we know the number of the degrees that we have gone on the base and have reached the apex by the line of sight; then if we know the measurement of these degrees, we know the whole story; the problem is virtually solved. The base and vertical of the quadrant are simply two *radii* of a circle, and we may as well declare that the two points of the compass will not determine the center and the circumference of a circle as to ignore this principle; this is the principle of measuring distances across rivers, without crossing or the altitude of any object unattainable otherwise; it is the process of measuring by "parallax." It is as infallible a principle as the finding of the two ends of a rod or beam in order to determine its length.

We have determined by these evidences given, that we have no use for the transit of Venus to prove the distance of the sun from the earth; its transit has no more to do with it than has a transit of the Belt Line passenger train going around the city of Buffalo.

The Sun's Distance.

(By Lewis Swift, Ph. D. D., Warner Observatory, Rochester, N. Y., U. S. A.)

The writer feels that he would be doing injustice to all parties concerned were he to ignore the most eminent writers and so-called scientists of the present day. To such as are unacquainted with Prof. Swift, I can do no better by them, in giving an introduction to the gentleman, than by giving a few quotations from his writings, and in due honor to the gentleman will say, that I believe it is universally understood that

Prof. Swift is one of the leading lights of the Newtonian system of astronomy, and as we shall see, an adherent to Kepler's Laws. We make no attack upon the gentleman, but it is the system that we propose to portray and compare parallel with that which we have endeavored to set forth. And we will further add that we believe the professor rightly represents the globular theory, and rotundity of the earth. We will commence on page three, second paragraph of the professor's "Simple Lessons in Astronomy" under the head of the "Solar System:"

"The Solar system is comprised of the sun and of all the bodies, by whatsoever name they may be called, which periodically revolve around him as a center.

"The known limit of the planetary system is the orbit of the planet Neptune, but it would not greatly surprise an astronomer at any time to hear that an extra Neptunian planet had been discovered. The extremes of the planetary system then (as recognized by astronomers), are Mercury, the nearest, and Neptune the most distant from the sun. This limitation does not include the hypothetical intra-Mercurial planet or planets discovered by Prof. Watson and myself during the total eclipse of the sun in 1878. The names of the planets in the order of distance from the sun are Mercury, Venus, Earth, Mars, the groups of the Asteroids, Jupiter, Saturn, Uranus and Neptune.

"Mercury and Venus have no satellites; the Earth and Neptune have one each; Mars has two; Jupiter and Uranus have four, while the ring planet Saturn, has eight.

"All the planets revolve around the sun, and as far as known rotate on their axes in the same direction — from west to east, as also do all the satellites, except those of Uranus and Neptune,

which revolve around their primaries from west to east, or opposite to the motions of the hands of a watch."

We have paused until the fourth paragraph has run its length, and here let us have a few words. We notice in the above paragraphs, first, that which comprises the Solar system is (in paragraph third, as stated) eight primary planets, having all told, twenty satellites; Uranus four, and Neptune one, making five, or one-fourth of the whole number, which revolve in a contrary direction from the hypothetically established laws of gravitation, and Kepler's *laws* or any *other man's laws* of centrifugal and centripetal forces. Including the primary planets, there would be twenty-three (besides the asteroids), five of which are running in contra-distinction, adverse to all known, or at least explainable, by inherent principles. This, it seems, should be sufficient to annihilate the whole Newtonian system. But it seems that there are always a large majority of that class of people who like to be duped, and prefer fairy tales to solid facts. But we will listen to a couple of paragraphs of the eloquent professor:

"Every member of the Solar system, be it planet, satellite, meteroid or comet, moves in an orbit called an ellipse. Though the orbits of the planets and their satellites differ in form but little from the circle, yet not one is known to actually describe that most beautiful of all curves. The ancients were loth to believe that God would cause or permit the planets to move in any other orbit but the perfect circle, but as soon as they broke away from that delusion and adopted the elliptical orbit, they found that computation and observation agreed at all times, while before, they agreed and disagreed periodically [and so they do yet]. For this the world is indebted to the genius of the *immortal Kepler*, who brought *harmony out of confusion* by the first of his three laws of planetary motion.

“*Motion* of every kind pre-supposes a moving power. This Solar system, whose center is the sun and whose circumference extends half way to the nearest star, is filled with worlds, every one of which is in *motion*. *Motion* seems here and everywhere to be almost an attribute of matter. There is not in the universe a *particle* of *matter*, be it a world or a molecule, which is at *rest*. And that the sun can hold at arm's length, as it were, *such huge globes as Jupiter, Saturn* and the other planetary and cometary bodies, and *swing* them *around their orbits* with such undeviating exactness that for *millions of ages* has not for a single instant relaxed its firm hold, is a striking example of the mighty influence which *attraction*, next to God, the presiding genius of the universe exerts on enormously distant worlds. [But where, oh tell us, where shall rest, *sweet rest*, be found?]

“For this,” says the professor, “the world is indebted to the immortal Kepler who brought *harmony* out of *confusion* by the first of his three laws of planetary motion.” But we will ask the professor to just state something of the characteristics of Mr. Kepler; what were his views? “The following are the views of Kepler, who, though one of the founders of modern astronomy, possesses in his character the strange admixture of exalted greatness and incomprehensible weakness, which latter evidenced itself in mystical speculations. It was he who taught that the planets were arranged in accordance with musical concords, Jupiter and Saturn taking the bass, Mars the tenor, Venus the treble, and Mercury the alto, from which has arisen the expression ‘The music of the spheres.’ He it was also who believed *the earth rested on a turtle*, whose breathings in and out of the waters caused the ebb and the flow of the tides.” Mr. Swift, what do you consider the underlying principle of your *whole system*? “But though the

author of these and other astronomical absurdities, he made his name immortal by the discovery of the three laws of planetary motion, which *underlie all our later astronomical knowledge.*"

Such is the opinion of the renowned D. D. in regard to the value of the individual judgment on whom all seem to stand or fall, so far as the universally-accepted system of astronomy is concerned, and on that which his knowledge is founded.

In order to satisfy the public that we were not using simply our own individual ideas, of the sun's altitude and dimensions, we wrote Prof. Swift on the 12th of September, 1889, and received the following statement:

"WARNER'S OBSERVATORY,
ROCHESTER, N. Y., U. S. A., Sept. 14, 1889. }

DEAR SIR—The altitude of the sun's lower limb at noon at Buffalo on September 21st will be $47^{\circ} 2' 38''$ and the upper limb $47^{\circ} 34' 36''$.

Yours truly,

LEWIS SWIFT."

We suppose if we had asked the Rev. Dr. the diameter of the sun's disc in just so many words he would have kindly given it as he has taught others in his "Simple Lessons of Astronomy," namely, 886,000 miles. Now if we subtract $2' 38''$ from $34' 36''$ we have $32' 38''$. This is, of course, on the Equator, and occupies a little over half a degree, which corresponds to about 35 miles for the sun's diameter. This latter statement by the professor is as all other scientific observers gives it; and we would like to see them harmonize the 35 miles with 886,000 or the 2,000 or less with 93,000,000, both of which the Rev. professor freely gives, and at the altitude as given on the Equator, and the diameter as he has given it, its lower limb would wipe the earth out of existence at one revolution, and its upper limb would clean the firmament above.

Another infallible evidence that the earth is not a globe, is

this: The sun being determined at these angles they determine its distance; also the amount of the surface of a globe that it could *possibly cover* at one and the same moment of time, would be just six hours, or one-fourth of the earth's surface. Thus, we limit the twenty-four-hour day to six hours sun and eighteen hours darkness. There is no evading these conclusions.

If, from the day that we observe the sun at 45° north latitude, and at the angle of 45° , we travel south ten miles each day, for just ninety days we will find the sun at the angle of 45° each day. The sun has then reached the southern limit; we can then start back at the same rate, and for ninety days more keep it at the same angle; thus determining the fact that the sun ever remains the same distance above the earth. And as the sun travels in a spiral orbit from north to south, and *vice versa*, at the rate of 10 miles per 24 hours, and makes two and one-half consecutive revolutions at each solstice or termini, it never leaves that termini at the point where it entered it; consequently, does not run back exactly in the same track or cross the meridian lines in just the same place in the one journeying that it does in the other, thus accounting for the difference between sunrise and noon, and noon and sundown, which is known to exist; also, its journeying to and fro accounts for the change of the seasons.

On September 12, 1890, we addressed a second letter to Prof. Swift, asking for the altitude of the sun on the 21st and 22d of that month at Ottawa, Canada, and received the following reply:

“DEAR SIR—South of the Equator meridian altitude equals co-latitude to declination.

“North of Zenith to Pole meridian altitude equals latitude polar distance.

"Below the Pole it equals declination to co-latitude. Thus:

Pole.....	90
Latitude of Ottawa.....	45
Co-latitude of Ottawa.....	45
Declination of sun.....	00
Meridian altitude of sun.....	45 on September 22.

Yours truly,

LEWIS SWIFT."

Inasmuch as we prefixed our article at its head "Sun's Distance, by Prof. Lewis Swift," in justice to the gentleman, we will quote his own words from his own book "Simple Lessons in Astronomy," page 88:

"Now the diameter of the earth's orbit is 186,000,000 miles, and its radius is half of that amount or 93,000,000 miles, the earth's distance from the sun. We may ascertain its place by taking half its displacement as observed from the two extremes of the earth's orbit at an interval of six months, or 186,000 000 miles apart. This gives the radius of the circle or base line of a triangle. As, therefore, 93,000,000 miles are equal to a radius or 306,265, 1'' will equal 206,265 times 93-000,000=19,182,645,000,000 miles, a distance which an express train of forty miles hourly would require nearly 52,500,000 years to traverse. This explanation shows why, if the parallax of a star does not equal 1'' its distance is *at least* 206,265 times that of the sun, and probably much more, as we cannot be certain of the accuracy of any measurements below 1'' of arc, an exceedingly small quantity with which to deal, only 1-1,296,000 of the circumference of the sky!"

But what if in the supposed diameter of the earth's orbit of one hundred and eighty-six millions of miles (186,000,000) we find no parallax (displacement) as many of the Newtonian, Kepler and Copernican school affirm? What would the natu-

ral conclusions of a class, or company of professed scientists, who had established an observation of a known star or fixed point in the heavens, after a ride of 186,000,000 miles from their starting point, and then on the second observation find that they had made no progress?—the star no farther, no nearer! Could they not justly conclude that their once united brains, if any they had (?), had now become one united conglomerated “mux” (as Josh Billings calls it), caused by the whirling and spinning of that terrible machine and wonderful piece of mechanism, the globe, during that six months journey of 186,000,000 miles! But this we say (and we will give their own words), that not more than the 91-100 part of a second of arc was ever claimed by the most sanguine adherents, and this denied by the more considerate. We will give you just one quotation at this time. “The diameter of the earth’s orbit is 200,000,000 miles [Prof. Swift says 186,000,000 miles! Well, fourteen million miles is not much difference, anyway]; yet we can detect no difference in their apparent places, viewed from the *opposite* points of this diameter; a change of place amounting to a second would be detected by the accuracy of modern observations.” [Yes, surely, if there any existed and they should come as close as the above]. Encyclopædia Americana, article on Astronomy, p. 433.

In order to make Prof. Swift’s letter of September 12, 1890 (which we gave a few pages back), plain to those unacquainted with astronomical terms, we herewith give a diagram that will more intelligently fix in the minds of those unacquainted with the absolute facts as they do exist. Without any reference to actual distance according to measurement, we give the relative position of FOUR established points, that are not dependent on the theory of man for their affixed position; they are as self-evident as that which the Creator

gave to rule the day, and bring to man the return and the change of our seasons, and until He who rules and reigns above shall otherwise decree, they will so remain. Before calling attention to the diagram, I will say that THREE of the above named points are so established and so ordained by the Creator, that they are accessible and of daily evidence to a great portion of the human family.

In fig. 24 we will commence our illustration:

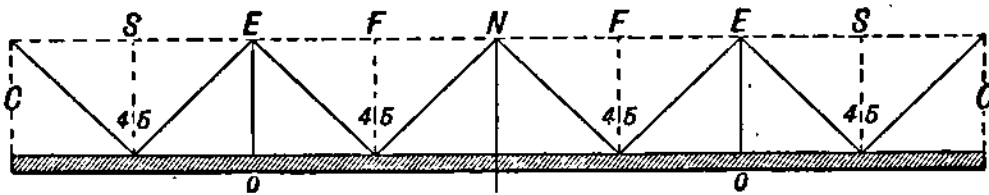


Fig. 24.

Let N represent the north center, commonly called Pole. This is north to every man on earth, no matter what his location may be. Let E E represent a cross section of the Equator through the North Pole N. Let the sun be on his circuit through the heavens, and his well-known position on the 21st and 22d days of March and September respectively, which is E E. We now have a "fixed" point; the Equator, No. 1. We next take F F, which is midway between E and N, on either side of N, and it is 45° N., being north of the Equator and co-equal in distance to the Equator on all sides of the north center, and this establishes the "fixed" point No. 2, the latter no informed person will question. Now, right here, bear one thing in mind worthy of ever retaining, for here is established points that will be brought into requisition further on, and ever after, namely: The people who live at 45° on both sides of the north center, and in fact all the way around the north center, and at all times of the year behold the north star at a *maximum* angle of 45° altitude.

We will mention the well inhabited countries through which this line 45° north passes, on which all people behold the North Star at a maximum altitude of 45° in the heavens, and the sun the same on the aforesaid days of the year—September 21st and 22d and March 21st and 22d. They are as follows: Turkestan, Turkey, Russian Empire, Romani, Austria, Italy, central portion of France, Southern Canada, northern part of the United States and the Chinese Empire.

Therefore, certain we are that we have one more nail in a sure place, and have established a fixed point—No. 3. And whilst we are here, before we leave this point, kind reader, let me suggest a thought: Suppose for a moment that N is the apex of an Egyptian pyramid, or a cone, whose angle of its sides in all places is just 45° ; now place good marksmen all the way round the pyramid at its base, and let there be a small target close to the apex; at a given signal all are expected to fire at the target, and he who misses his mark, under equally favorable conditions, is not worthy the honor of a sharpshooter. Now, where would these men be most likely to aim? Would they expect to hit the mark, should they fire into the horizon or the zenith? Would they not aim along the line of the sides on an angle of the pyramid? We will let you consider this at your pleasure, but will say further, that in the diagram, fig. 24, 45° FF and 45° SS, all sustain the same relation to EE (the Equator) as the above illustration does to the North Center, and this establishes a "fixed" point—No. 4.

A few words in regard to 45° SS: Now, SS maintains the same relation to EE as does FF, heretofore described; but the relations that 45° SS sustains to CC, no human being can tell. The ice belt is found at between 54° and 56° south, $78^{\circ} 10'$ being the greatest extent ever reached by man. This was Sir James Ross, of whom we will speak in particular further

on. So far in this chapter we have only been able to give you the distance of the sun from the earth according to the Newtonian theory, together with Prof. Swift's figures and statements, which are acceptable generally with that system. As we have seen, if two astronomers of the Newtonian school come within fourteen million miles of each other as to the result of their estimations, it is very close. However, we trust that the reader who has followed us patiently, will have a good understanding of the "relative" position that we sustain to the sun and the North Center. We have not as yet given our figures for the altitude of the sun, nor the North Star, nor the diameter of the Equator; but having established our bearing at the Equator and North Pole, if we allow the North Center to be 90° , which is claimed, and we will so estimate for a while yet, surely 45 is half of 90. But in this we are estimating on the principle of the earth a globe, which we have found will not do; we have proved it a plane, and as it is a physical inconsistency and a literal impossibility to make the diameter equal to the circumference, so it is impossible to have the same number of degrees in the diameter or radius of a circle, and still have those degrees co-equal in length.

A Scale of the Solar System.

Below we give a true scale of the Solar System which will demonstrate the matter still farther. First, we affirm that there are but $57\frac{1}{2}$ co-equal degrees in the radius of a circle. See fig. 25, the following scale of the Solar System.

As we have seen that there are but $57\frac{1}{2}^\circ$ in the radius of a circle, we are now ready to commence to measure; and as the Equator (see fig. 25) is a fixed point we will commence there. We will take 15° on the Equator for our measuring rod—which is acknowledged to be 900 miles. (Sixty miles

vertical are given to show where the meridian lines would come in case it should be claimed that the degrees of latitude are equal to the degrees of longitude, which, as we have proven, are not admissible.

In the above we have determined these distances by the most rigid geometrical process. We believe it as immovable as the Rock of Gibraltar, and there remains one more point unexplained in regard to the right angle quadrant, which we give for the benefit of those who may require it. When the base and vertical, or as some may term it, when the two sides of a right angle are equal in length the hypotenuse sustains the same relation to the two equal sides, as 17° to 12° . This admits of no remaining decimals. For instance: the base being twelve inches the hypotenuse, intersecting the vertical, will be seventeen inches. The sides will admit of equal proportions at this ratio, and no variations.

Here are due many thanks to my conservative friends, who have kindly offered criticisms and cautious suggestions for which I am truly grateful, and hope ever for their continuation. Some of the Zetetic faith had given the sun's altitude 2500, some 3500, and some even less than I have given it. By what process they have arrived at the various results I do not know, but I know of no other geometrical process than the last herein given.

CHAPTER XV.

Extent and Form of the Sun's Rays.

WHILE we have been able to prove from many infallible sources that the earth is not a globe, we have not always been able to account for all phenomenon on the basis of either the earth a globe or a plane; therefore, we have had to let demonstrated facts rest, and wait patiently for further developments and additions, corroborating that which has been previously proven. One difficulty with the advocates of the earth a plane, has been to show night and day of equal length on the Equator when the sun *was on the Equator*; namely, on March 21-22 and September 21-22. It is well known by all who have noticed our almanacs that for the latitudes of 35° — 45° N., they give as equal length of day and night; March 15-17 and in September as late as the 26th. We also think proper to here state, that while some have confidently affirmed that equal day and night was on the 21st and 22d of March and September respectively, if they who live in the aforesaid latitudes will observe sunrise and sunset they will know for themselves, especially those who can observe it at sea.

We herewith give three cuts, figs. 26, 27 and 28, which are, approximately, our understanding of the form of the sun's rays in his variations from one solstice to the other in the change of his seasons. We wish these to stand as correctors and substitutions of diagrams on pages 90, 92, and map on the 97th page of our former book, the first edition of "Is the Bible from Heaven? Is the Earth a Globe?"

I will here give honor and credit to whom I believe it due

for the advanced thoughts that have caused this production, and I cannot see why it is not logical and in harmony with other *positive* evidences of the earth a stationary plane. Mr. R. E. L. Lovell, of Vadis, W. Va., a scholarly young man, first gave me the ideas and a sketch from which I have developed what you may here behold in a brief description:

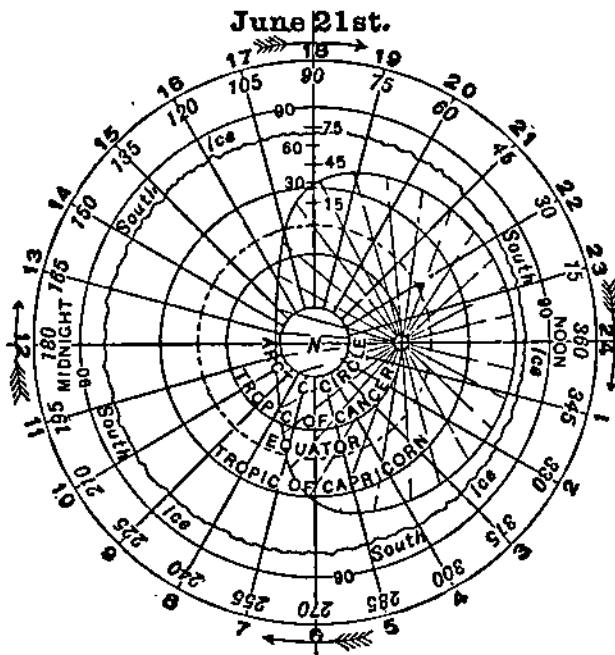


Fig. 26.

the outer circle. The second circle marked 90° and beyond the irregular line, marked south ice, no human being ever navigated; $78^\circ 10'$ is the greatest limit ever reached south of the Equator. Here are the everlasting bounds of perpetual ice. Fig. 27, or December 21st, is the sun's southern limit; his rays should extend, longitudinally, some farther over his daily path, in order to account for the longest days south of the Equator.

Yet, this is only an approximate construction, and it is well known and will be proven further on, that the days in the extreme south do not correspond to the day's length in the north. Were the earth a globe they should be co-equal. Fig. 28 or September and March 21st and 22d respectively, is the sun's

Fig. 26, or June 21st, shows the sun in his position on the northern or inner solstice, on the longest days we have north of the Equator, in which his rays extend to the greatest limit. It will be noticed that we have furnished each figure with the 360° and the twenty-four hours divided and marked on

equatorial position, and on the Equator they have JUST TWELVE HOURS SUN, and of course twelve hours dark.

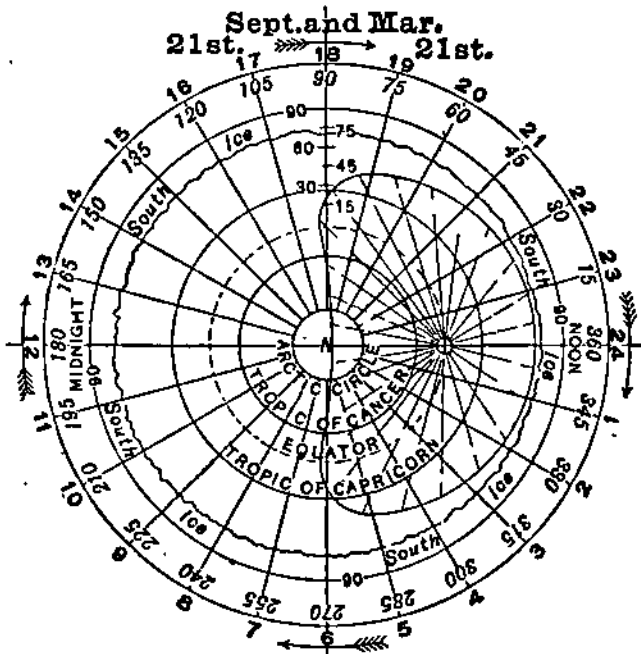


Fig. 28.

being on the Equator on the 21st of March and the 21st of September; then again speak of its being the 22d. This may be a query to some that have not given the matter consideration, but it may be remembered that the 180th meridian is the line established by civil reckoning for the change of date in crossing the day line. Thus, east-bound a day is gained, west-bound a day is lost. In fact, no actual time is lost or gained; but as the sun makes his complete circuit to a given meridian every twenty-four hours, there must of necessity, in a commercial point of

Were the sun so much larger than the earth, or should we behold the sun by refraction, in part, as is claimed by the globe advocates, then certainly there would be more than twelve hours sun on the Equator—the like of which was never known.

EXPLANATION: We often speak of the sun's

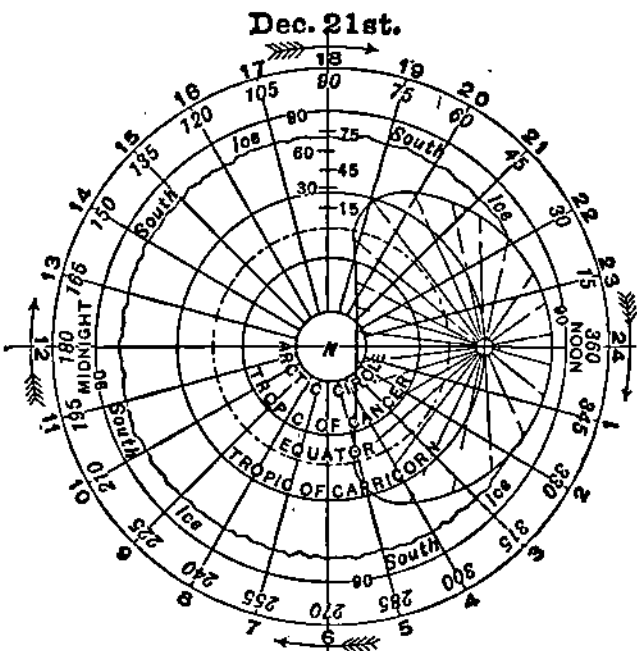


Fig. 27.

view between the nations, as well as a legal civil law, be an established Day Line. There must exist an acknowledged starting point, and the same must be the end. This part of the subject we hope to mention further on, but trust this will suffice for the apparent discrepancy in the above dates.

But to return to our subject—the heading of this chapter. We will give Mr. Lovell's own words and logical reasonings for the shape and extent of the sun's rays:

“I fell into the channel of thought from reading the following in G. P. Quackenbos' Natural Philosophy, a chapter on Optics, under 'Division of Bodies.' 'No substance transmits light without intercepting some by the way. It is computed that the sun's rays lose nearly one-fourth their brilliancy by passing through the earth's atmosphere, and that if this atmosphere (forty-five miles) extended fifteen times as far from the surface as it does, we should receive no light at all from the sun, but should be plunged into perpetual *night*.'”

“Now, light penetrates the rare body further than the denser. It also passes through the more transparent more readily than through the less transparent. Storms refine and purify atmosphere; heat expands it, and cold condenses it. The southern atmosphere is more transparent than the northern. The Tropical or Equatorial is expanded and more rare than the Arctic. [The sun's rays ever extend farther east of his center or nucleus, directly under his path in the heavens, than any other direction.—Author.] With these facts in the mind of the reader, we think the diagrams will be understood.”

The path over which the sun daily travels, and is rapidly moving, must of necessity be kept the hottest, and therefore the most expanded. The portion of the sun inside of the sun's path, that which is daily surrounded by the rays, or all north of the Equator, receives greater benefits from the light

than does that southern portion of earth and seas that are only passed by once in twenty-four hours; hence, the logical reason for more ice in the corresponding south latitudes than the north. And another phenomenon is apparently explained in the following: Of the twilight, morning and evening, in that latitude, I give the respective words of two reliable missionaries from Australia and Borneo. Rev. Father Johnson, a Catholic missionary says: "We have from *five* to *six* minutes twilight morning and evening; it does not exceed the latter." Elder S. N. Haskel, S. D. A., says: "At Melbourne we make preparations for the night while we can yet see the sun, because when it is sundown it is dark *immediately*."

I suppose that the assertion "immediately" is in a relative sense, he having been accustomed to our long twilight of an hour or more. Now, it is evident that were the earth a revolving globe with the sun at its equatorial center, there would exist co-equal twilight.

Day's Length vs. North and South.

Inasmuch as it has been stated by our globe favorites that the same condition of things relative to the length of days, long continued absence of the sun, etc., existed, and that the flat-earth advocates failed to show by their demonstrations the actual condition of things as they are known to exist, we have decided to present a few well-founded and well-known authenticated facts to show their statements are without foundation:

At Stockholm, Sweden, latitude $59^{\circ} 21'$ North, there is $18\frac{1}{2}$ hours sun.

At Hammerfest, Norway, latitude $70^{\circ} 45'$ North, there is continual sun from May 11 to July 22—three months. At Spitzbergen, 78° N. latitude, the longest continued day is *three and one-half months*.

The longest day we are able to find on record in the South (practically observed) is on pages 133-135 of "Antarctic Cruise," by Capt. Wilkes. He says: "On January 16 the sun set at a few minutes before ten.... The effect of sunrise at a little after two o'clock, on the 23d was glorious." This, though not definite, would give them a day something over nineteen hours' length in the latitude 66° south. But to contrast, we give *St. Petersburg, Russia*, latitude $59^{\circ} 56'$ N., nineteen hours sun, the latter being about six degrees, or over 400 miles nearer the Equator; yet, about the same length of day, each of these ever having their summer or longest days. But lately I received an official statement from Prof. J. Morrison of the *Nautical Almanac Office, Bureau of Navigation, Navy Department, Washington, D. C.* In reply to my interrogations, he says:

"On December 21st and 22d at South Shetland, about 70° South (see any good map of the world), sun rises 2h. 3m. 30s.; sun sets 9h. 56m. 30s.; total 19h. 53m. *Longest continued day.* Reverse the results for June 22d and we shall have for June 21st and 22d sun rises 9h. 56m. 30s.; sun sets 2h. 3m. 30s.; total 7h. 53m. *Shortest continued day.* The above results are for the Sun's Upper Limb, or for the very first and last rays of sunlight; and are *absolutely correct.*"

J. MORRISON.

From the above we have learned that at 78° north latitude (Spitzbergen) there is a summer in which the longest day is three and one-half months

We will turn our attention again to the Antarctic regions, and shall find that of all the navigators on record, Sir James Ross has penetrated the farthest south. He reached the highest austral latitude of $78^{\circ} 10'$. While we are noting an interesting expedition, or such portions of it as may be of interest to the reader, please bear in mind the fact that no record is made

of any LONG SUNNY DAYS during their SUMMER MONTHS, which are the most favorable seasons for south sea expeditions.

THE FRENCH ANTARCTIC EXPEDITION.

“In January, 1839, the French expedition under Dumont d’Urville, proceeded south from Tasmania and discovered two small islands on the Antarctic Circle named ‘Terre Adelie’ and ‘Cote Clarie.’ At the same time Commander Wilkes of the United States expedition made a cruise to the southward and mapped a large tract of land in the latitude of the Antarctic Circle, for which he claimed the discovery. But as a portion of it had already been seen by Balleny, and the rest has since been proven *not to exist*, the claim has not been admitted.

THE ENGLISH ANTARCTIC EXPEDITION

Was undertaken in 1839 to 1843, mainly with a view to magnetic observations and the determination of the position of the South Magnetic Pole. Two old bomb vessels, the Erebus and Terror, were fitted out under the command of Captain (afterwards Sir James) Ross, with Captain Crozier in the Terror. The cruise for the second season was commenced from Tasmania [south of Australia between 42 and 45° south latitude] in November 1840. The Auckland Islands and Campbell Islands were first visited and surveyed, and on New Year’s day, 1841, the Antarctic Circle was crossed in about 172° E. A few days afterwards the two vessels were beset in the pack [ice] and began persevering and boring through it. By January 10th they succeeded, and were clear of ice in 70° 23’ S., and next day land was sighted, rising in lofty peaks and covered with perennial snow. That day Ross passed the highest latitude reached by Cook (in 1773, 71° 15’ S.). On a nearer approach to the land there was a clear view to the chain of mountains, with peaks rising to 10,000 feet, and glaciers filling the inter-

vening valleys and projecting into the sea. The land interposed an insuperable obstacle to any nearer approach to it. Captain Ross landed with great difficulty, owing to the strong tide and drifting ice, on a small island near the shore, named Possession Island, in $71^{\circ} 56' \text{ S.}$ and $171^{\circ} 7' \text{ E.}$

"Inconceivable myriads of penguins covered the surface, but no vegetation was seen. Next morning there was a southerly gale which moderated, and on the 18th of January

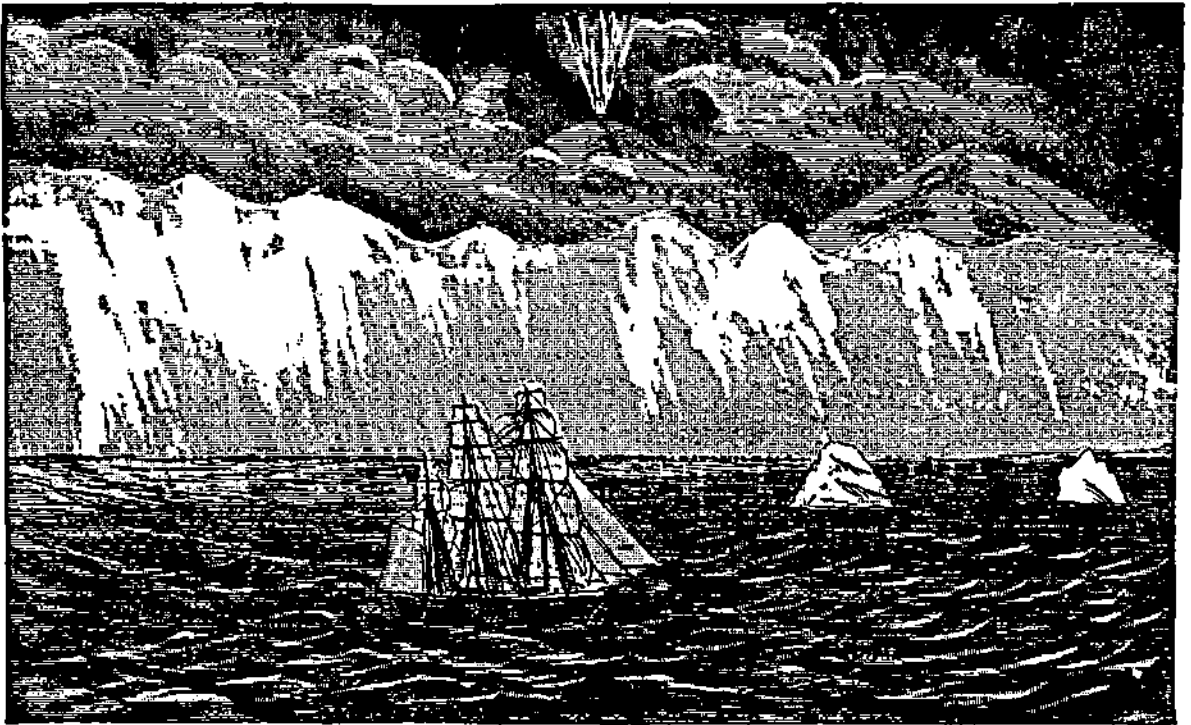


Fig. 29.

they were again sailing south in an unexplored sea. [No mention is anywhere made of extreme long days to correspond with co-equal latitudes of the north, as there necessarily should be were the earth a globe.] On the 23d they were in $74^{\circ} 20' \text{ S.}$, and thus passed the most southern latitude (reached by Captain Weddell in 1823). Sailing along the newly-discovered coast Captain Ross landed after much difficulty on an island named after Sir John Franklin, in $76^{\circ} 8' \text{ S.}$

“On the 27th they came in sight of a mountain 12,400 feet above the level of the sea, which proved to be an active volcano, emitting flame and smoke in great profusion. It was named Mount Erebus, and an extinct volcano to the eastward, 10,900 feet high, was named Mount Terror. Along the coast as far as the eye could reach to the eastward, there was a perpendicular cliff of ice from 150 to 200 feet high, perfectly level at the top, and without any fissures or promontories on its seaward face. Nothing could be seen above it except the summits of a lofty range of mountains extending southward as far as 79° S. To this range the name of Parry was given. Captain Ross then sailed along the marvelous wall of ice eastward in $77^{\circ} 47'$ S. as far as 78° S. This barrier was estimated to be 1,000 feet thick, and it was followed for 450 miles without a break.

“The whole of the great southern land discovered by Sir James Ross was named Victoria Land. [Imagine if you can the amount of centripetal force there must be concentrated to the center of a globe or sphere, to hold these mighty walls of ice and mountains of frozen material in place. Is not the statements of the prophet Job easily reconciled with the above? ‘Hast thou perceived the *breadth* of the *earth*? Declare if thou knowest it all.’ (Job 38: 18). ‘The waters are hid as with a stone and the face of the deep is frozen.’ (30th verse Job, 26: 10.) ‘He hath *compassed* the waters with bounds, until day and night come to an end.’—Author.]

“In November, 1841, the Erebus and Terror again shaped a southerly course, entered the pack ice on December 18th (summer), and once more crossed the Antarctic circle on New Year’s day. The navigation through a belt of ice 800 miles broad was extremely perilous. At length, on the 1st of February, 1842, a clear sea was in sight, and they proceeded to

the southward in $174^{\circ} 31' W.$ On the 22d they were surrounded with lofty icebergs aground, and at midnight the great Ice Barrier was sighted and its examination recommenced in $77^{\circ} 49' S.$ *Next day* the expedition obtained a latitude of $78^{\circ} 10' S.,$ by far the highest ever reached before or since. After escaping imminent dangers, in navigating through chains of huge icebergs, Capt. Ross took his ship northward and wintered at the Falkland Islands.

THIRD EXPEDITION.

"In December, 1842, the expedition sailed from Port Louis on the third visit to South Polar region, seeing the first iceberg in $61^{\circ} S.$ On the 28th the ships sighted the land named after the Prince de Joinville by Dumont d'Urville, and the south side of the South Shetland's was surveyed. During February about 160 miles of the edge of the packs were examined. On March 11th the Antarctic circle was recrossed for the last time, and the expedition returned to England in September, 1843. Thus, after four years' most diligent work, the ably-conducted and quite-unparalleled voyage to the South Polar regions came to an end.

"Two islands named Heard and McDonald, were also visited (on this wise), November 1853, by Capt. Heard, of the American ship *Oriental*. In February they were driven southward by a gale of wind, and the first iceberg was discovered on the 12th in $60^{\circ} 52' S.$ It was 200 feet high and about 700 feet long. On the 19th the ship was at a dense pack of ice in $65^{\circ} 42' S.,$ and on the 4th of March they bore up to Australia. Several deep soundings were taken, the greatest depth being 1,975 fathoms [corresponding to about three miles].

"The route of the *Challenger* was much the same as that of the *Pagoda* in 1845, but more to the north. With it ends the somewhat meager record of voyages across and towards

the Antarctic circle." (C. R. M.) *Encyclopædia Britannica*, vol. xix, p. 330.

Antarctic Exploration.

We understand by authentic statistics that the expedition of the *Challenger* and the reports of her cruise cost the nation the extravagant sum of over one million dollars. This, the necessary result of which that government regards with cautious proposal as to any further scientific advances for any similar expedition. And it, we believe, expressed its discouragement of the proposed Antarctic expedition in connection with the Australian Government. The *Challenger* did not openly admit that it had searched for the South Pole in vain. Oh, no; but it sailed three times around the world, or upwards of 60,000 miles without being able to say that it had been fortunate enough to ascertain the existence of any such wonderful locality. Of course, it may have gone on searching as long as its timbers or platings held together, and the same disappointment must have attended its efforts. Right here a thought or two may be suggestive to the reader: Were the earth a globe or spheroid, inside of the Antarctic Circle the degrees of longitude could not exceed thirty miles to the degree, but if we allow them thirty miles for adversities of winds, currents, ice, etc., and multiply $360^{\circ} \times 60$ we have 21,600 in order to make a circuit of 10,800 (claimed by all globularists.) Yet, we can afford to be more liberal; we will call the multiplier 120, and the product in miles will only reach 43,200; a little over two-thirds of their nautical record as above, and most of this inside the Antarctic Circle. But after a circuitous cruise like the above record, and a fruitless expenditure of over a million of dollars, it seems quite natural for them to feel somewhat crest-fallen, in regard to their previous importunateness with the government; although the record does

not state that they were in search of a south pole, but a "magnetic pole!" Yes, and where did they expect to find it, if they found any such thing? And what did they expect to call it when found?

A suggestion here will do no harm, if it does no good. We charge nothing for our advice when it is not followed. The aforesaid expedition could have made just as great a failure, with less money. Two or three hundred thousand dollars expended in sending one expedition south-west of Melbourne and a second south-east, they would end themselves at a distance of a thousand miles or so, the same as a rat in a barrel, and still find themselves as far from their "magnetic pole" as the north is from the south, the east from the west, or the Kingdom of Heaven is from the earth. But in the words of another, we would say: "To be looking for a south pole at the end of the nineteenth century just because some pagan astrologers conceived the idea of a planet earth, some two thousand years ago and men are yet found who pretend to accept this heathen blasphemy, is presumption in the extreme. The ice barriers which constitute the earth's circumference, extend for some 30,000 or 32,000 miles, but present no opening large enough for the passage of a seal or walrus. No alternation of long days, as in the Arctic region but the months of May, June and July are enshrouded in one long dreary night, the snow never thaws, and the crash of the falling icebergs appalls the stoutest hearts. Therefore, unless any expeditions to these regions is conducted with peculiar caution and intelligence, it would very shortly end in discomfiture and dismay to all concerned. And if anything is attempted beyond the inquiry whether there is any southeast or southwest passage, no possible result can follow than loss and discredit to the promoters and cruel suffering to the parties engaged."

CHAPTER XVI.

Eccentricity of The Sun's Path.

OF the size of the sun we have only a few words to say, as we noted the matter in chapter 14. There is, however, nothing simpler and easier than the practice of plane triangulation, and nothing known to the surveyor more definite in procuring the altitude of any object inaccessible by any cause, such as across rivers, gulfs, the height of towers, steeples, etc. Prof. Lewis Swift kindly gave the triangulation of the upper and lower limb (edge), which virtually and emphatically gave the diameter, and that not exceeding twenty-five nautical miles. The earth, as we have previously proven, is absolutely without motion, either in axial or orbital direction. Both science and Scripture, as well as common sense, assert the positive fact of the diurnal revolution of the sun, as well as the rest of the planetary system only, with which the earth has no possible analogy, neither is the latter identified with the former only as a receiver of their benefits for which the Creator designed. The sun's speed, in the spring or autumn equinox, is, of necessity, just fifteen nautical miles per minute or 900 miles per hour—that being the distance between meridian lines of longitude on the Equator; in its lesser orbit, in the June solstice, 15° from the Equator. (We say 15° degrees from the Equator because we have proven in chapter 14, fig. 25 that that is correct.) North, its speed is proportionately reduced to 665 miles an hour, and increased to the same extent in its December or winter solstice, to 1,135 miles per hour. The following diagram will more forcibly bring before the reader

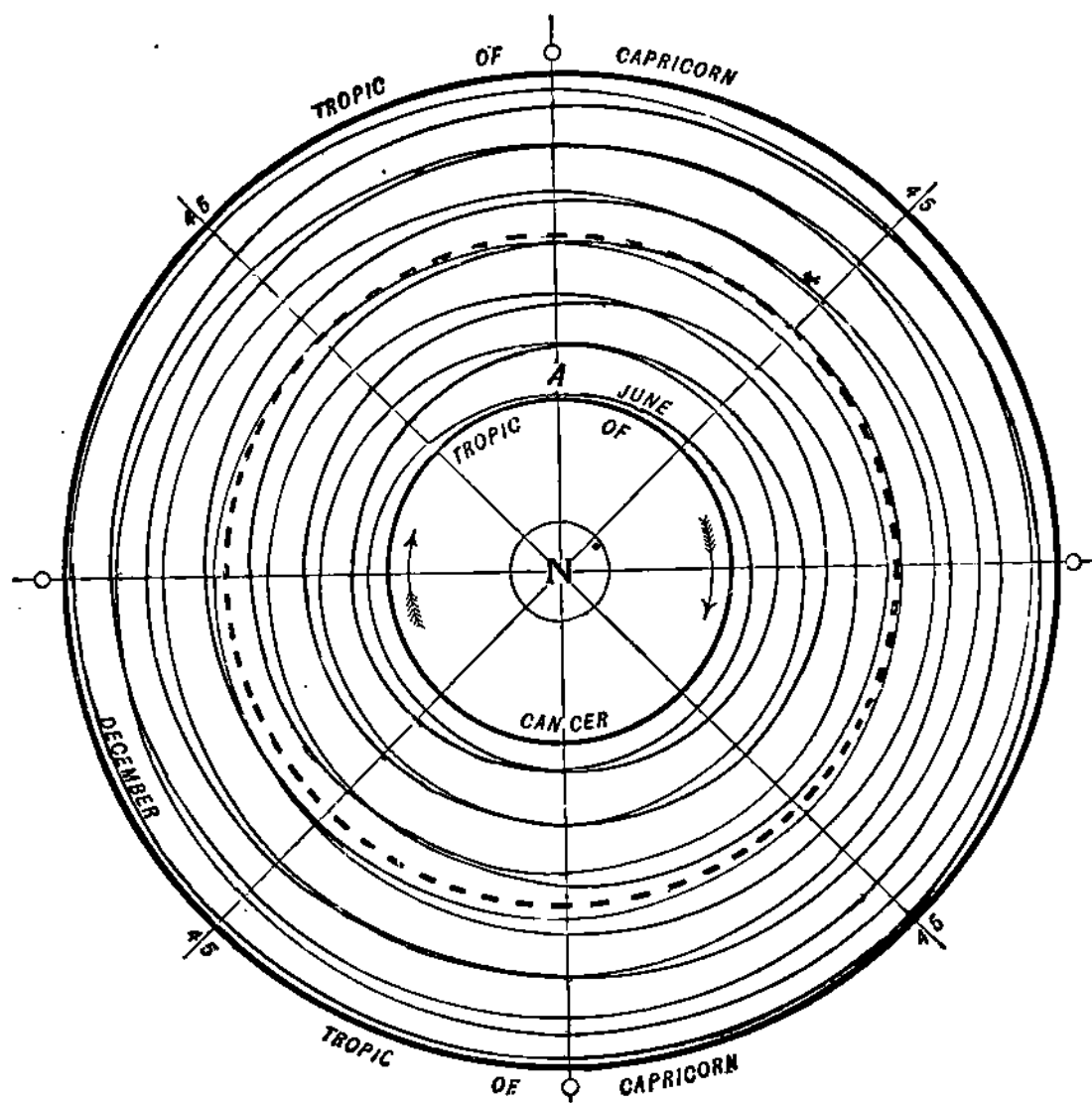
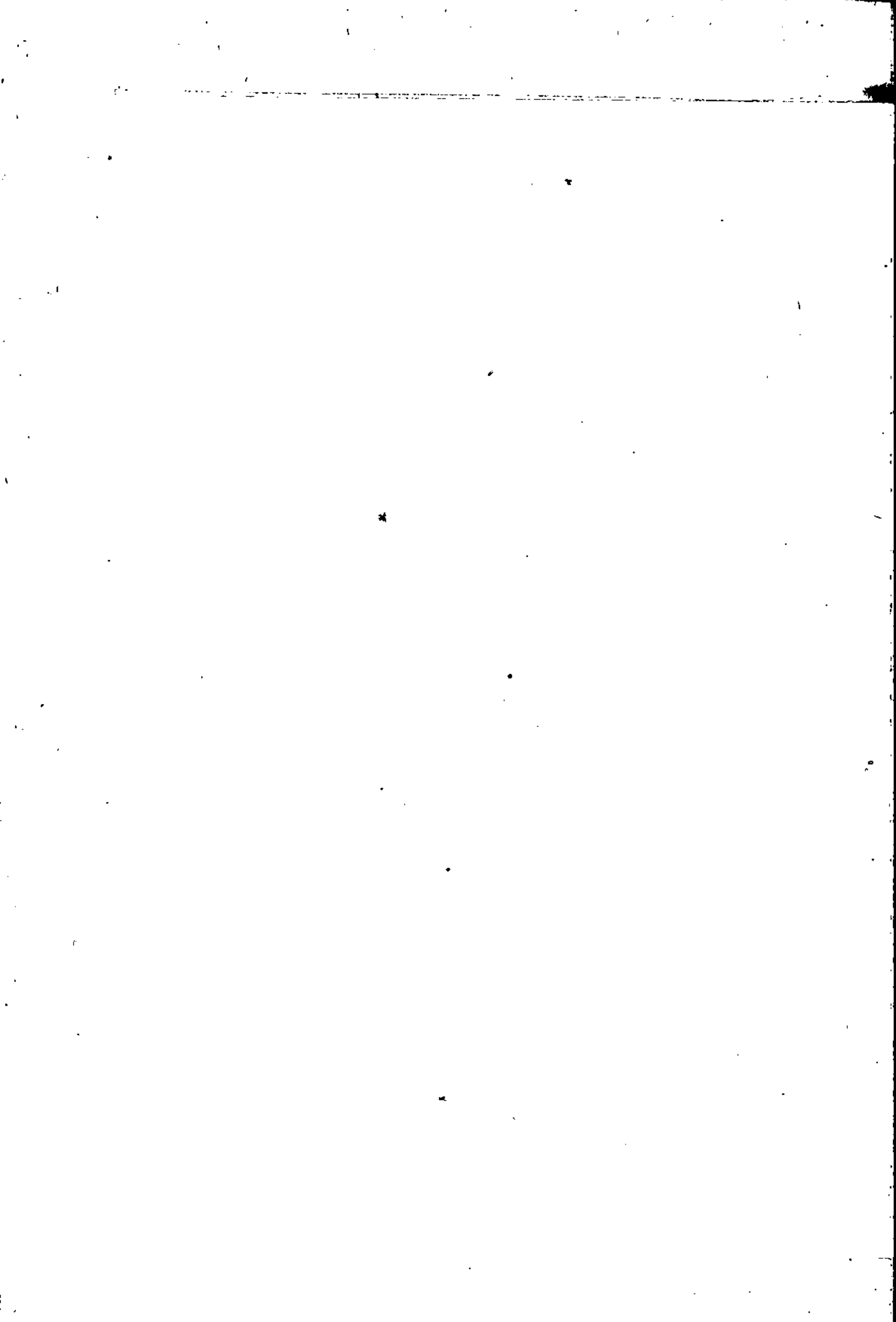


Fig. 30.



that peculiar course of our luminary, than we otherwise could. It is the demonstrated facts as to the sun's various positions at the Equator, his two tropics and intervening localities, as well as his altitude, that has called forth the facts set forth in the following. As to the exactness of the design or construction of the diagram, we make no claims; yet, we are confident that it properly illustrates the sun's spiral course between the two solstices.

In fig. 30 let N represent the north center, let the red line represent the June solstice, and the sun at "June" on the line 45; now trace with a pointer the red line until you run into the outer black line, and make one complete revolution and come round the second time; then take the first inner black line, at the junction where it commences to diverge from the outer line; keep your pointer ever on the paper, until you again reach the inner solstice "June." Thus you can continue to wind back and forth, or out and in, ever running in the direction of the arrows—the sun's course on his *never-ending journey* from west to east. For the Creator has declared, that while the sun and the moon shall endure before Him, the seed and name of the righteous shall endure. See Ps. 72: 5, 7; Isa. 31: 35–36.

It may be noticed that there is six black spiral circles and six red; these correspond to the twelve months, and in the sun's course bring the change of seasons. There is a few more interesting points that we will notice in regard to the long continued time regulator that courses his journey through the heavens.

Once in 651 years only it is that he crosses every line in his race, and appears on the very minute and second of time, and the minute and second of arc; also, the same day of the month and the same day of the week. It is only at the expira-

tion of that period and that number of journeys through the heavens, that he lands on the same identical spot or starts on his journey back from the same. Truly, "The heavens declare the glory of God; and the firmament sheweth His handiwork. In them [the heavens] hath He set a tabernacle for the sun, which is as a bridegroom coming out of his chamber, and rejoiceth as a strong man to *run* his *race*. His going forth is from the *end* of the heaven, and his *circuit* unto the ends of it." Ps. 19: 1-6:

Another worthy point to notice is this—that as the sun travels in his numerical precision of solar time, just 900 miles in one hour on the Equator from east to west, so does it travel just 900 miles in ninety days in his spiral course northwards or southwards; there being ninety days from equinox to solstice, the distance is just about 900 miles. Thus it is with all of the Creator's works; they will bear magnifying a thousand times, and yet there will ever be something for His wise creatures to learn.

The Solar System.

In Lockyer's Astronomy, page 78, is an illustration of the Solar system, giving the sun's disk with Jupiter, Saturn, Uranus, Neptune, Mercury, Venus, Earth, Mars and the thirteen Asteroids, arranged in two lines in their relative order, and each representing its relative size according to the globular theory. The cut fig. 31, will illustrate the diagram. We have only given one-half of the disk as he has it in his book, yet we have given all the planets, etc., their full size as claimed and set forth by him, and the diameter of the sun's disk, all these bearing their relative proportion to the sun. Now, if we put all these so-called mighty bodies in a line and close together, and measure Saturn across his rings, they would only reach a little more than half way across the sun's disk.

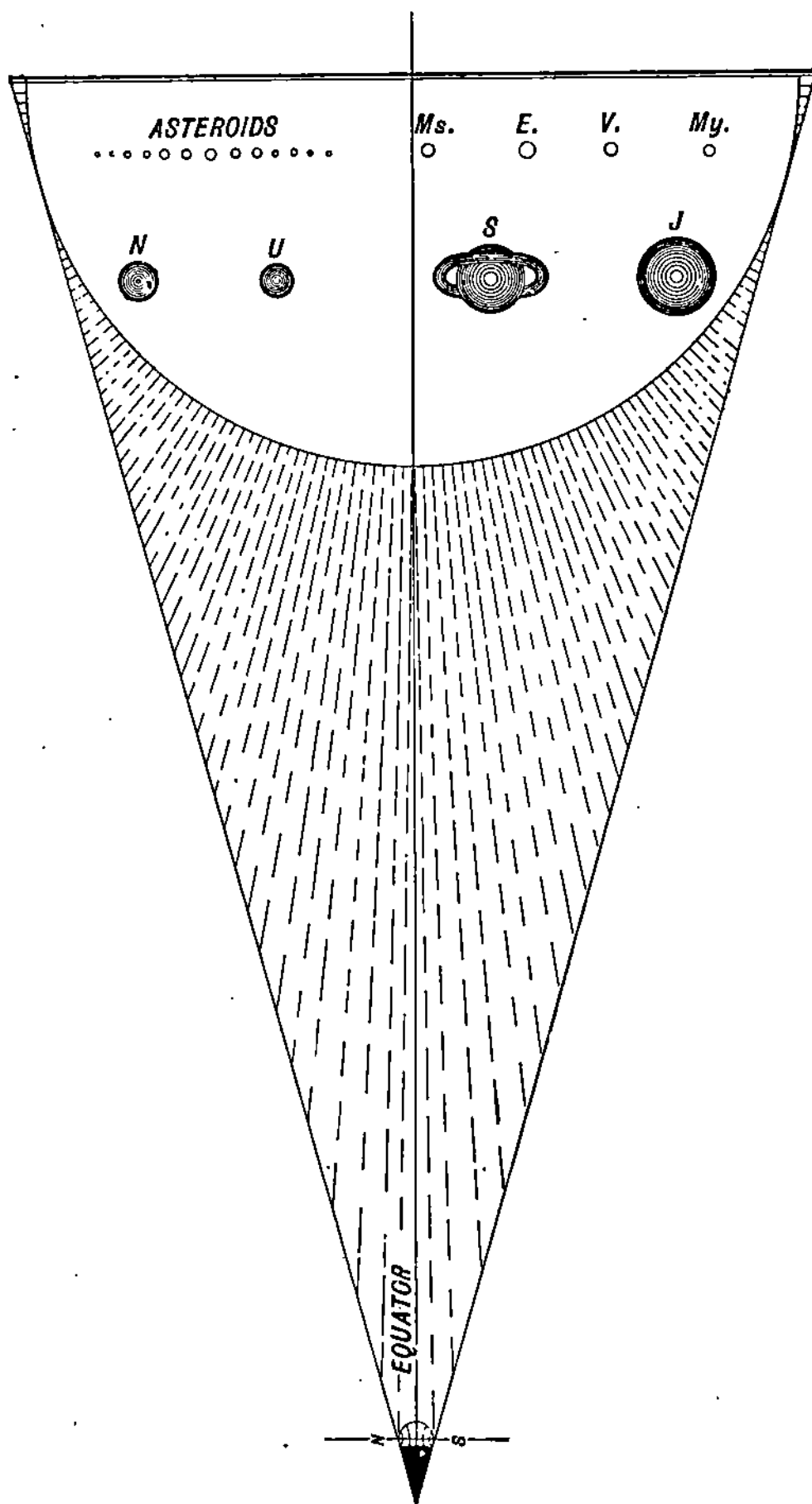


Fig. 31.

We have enlarged the earth to twice its proportions and placed it more than four times the distance that the actual triangulations require. Now, we have placed the sun on the Equator, and when in this position it is well known to all people, that on the Equator they have just twelve hours sun, and twelve hours absence of sun, there never being over six minutes twilight. But it will be seen that in this case about two-thirds of the earth is constantly lit up; therefore, as sixteen is two-thirds of twenty-four, there should be sixteen hours continuous sun on the Equator on the 21st and 22d days of March and September, respectively. This is only one of the thousands of like inconsistencies of building a system, and acknowledging it established; teaching it to our children in our schools; becoming elated, and like a soap bubble inflated, until collapsed, and find at last we had only a *mythological hypothesis*, whose weight and value is as incomprehensible as the cubic contents of the sun, of which Prof. Swift's "Simple Lesson's in Astronomy," page 9, says: "338,700,000,000,000,000, or three hundred and thirty-eight thousand, seven hundred billions cubic miles. In order to count the same a man would require two thousand million years!" And worse than all, the professor has Doctor of Divinity attached to his name, and on the last page of his book says that all this is, "The utterances of calm and *actual truth*."

The North Star, or Polaris.

This is not in the true north, but a radius of $1^{\circ} 22' 24''$ is the circumscribe from the acknowledged true north. The magnetic current which governs the surveyor's compass needle is very fluctuating, sometimes one side and sometimes the other from the true north, and this variation is known to all surveyors; but in early days, when the telescope was not

brought into requisition and points established by observations of the heavenly bodies, very bad or to say the least, great variations occurred in the running of our town lines, etc.

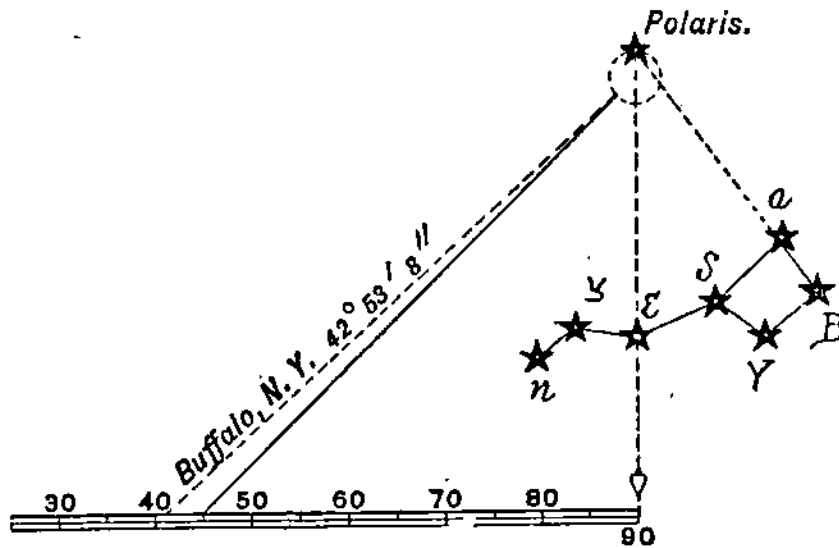


Fig. 32.

The position of Polaris is generally traced by the direction of the stars A and B, or Alpha and Beta, in the Great Bear. (See fig. 32.) Polaris passes the meridian on its true north when the star E in the Great Bear is perpendicular, either over or under Polaris. In low latitudes Polaris is near the horizon, and the Star E cannot be seen when under, but must be observed at its upper transit. When the star E is horizontal with Polaris, subtract the radius of the circle, and the remainder will be the true north, from which the variation of the compass is ascertained.

The maximum angle of the north star from the tower of the City Hall in Buffalo, N. Y., is, as shown in fig. 32, $42^{\circ} 53' 8''$, and at the City of Ottawa, in Canada, through which the latitudinal line of 45° north runs, the angle is 45° arc. As we have noticed this in diagram fig. 24, chapter 14, the reader will only have to turn back to that in order to compare facts with the wild and fanciful theories and inconsistencies of which we herein give a few from the other side of the house:

"The nearest known star has a parallax of $0^{\circ} 85''$, equal to a distance of twenty-two and one-half billions miles, and its light requires three and three-fourths years to reach the earth, though moving 185,500 miles per second. . . . Whenever we gaze at the North Star, the universal lighthouse of the sky, let us remember that its beautiful light which guides the navigator, left its fiery home forty-eight long years before. . . . All the first magnitude stars is equal to 4,484,000 times the earth's distance from the sun." Simple Lesson, p. 88.

Now, in order to arrive at the distance of Polaris (allowing that to be of the first magnitude), is to multiply 93,000,000 (the sun's distance) by 4,484,000, which equals 417,012,000,000,000 miles distance from the sun. Yet, the facts are as before given, the North Star subtends the same angle as does the sun when on the Equator to all people at 45° north all around the world. (See fig. 24.) Prof. Swift says:

"The four stars forming the bowl of the great dipper, Alpha, Beta, Gamma and Delta are on the body of the animal, while the three, Epsilon, Zeta and Eta, which, at the invention of the constellations, may perhaps have occupied some other place in the anatomy of the bear, and rendered the constellation more suggestive of its name than is its present configuration indicative of the animal's long tail, while in truth, the bear is almost destitute of a caudal appendage. This abnormal representation led an old-time pupil to make inquiry why Ursa Major has so long a tail, to which the ancient teacher made reply as follows: 'Jupiter, fearing to come too nigh unto her teeth, laid hold of her and thereby drew her up unto the heaven, so that she of herself being very weighty, and the distance very great, there was great likelihood that her tail must stretch,' and finished by adding: 'Other reasons none I know.'

"If then, the startling fact is conceded that all the stars are in motion, it follows that the time must come, in the far distant future, when every feature of the sidereal heavens as now viewed will be swept away forever. The time is slowly but surely coming, when there will be no dipper in Ursa Major, no chain in Casiopia, no sickle in Leo, no belt in Orion, no southern cross, and during all the eternal ages of the future they will never re-appear."

In reply to the above statements of Prof. Swift, we can only quote a few passages of that Word which he has heretofore claimed that he had a calling to teach. "Thus, saith the Lord, which giveth the sun for a light by day, and the ordinances of the moon and the stars for a light by night. The Lord of hosts is His name. If those depart from before me, saith the Lord, then the seed of Israel also shall cease to be a nation before me forever." (Jer. 31: 35, 37.) "But the saints of the most High shall take the Kingdom, and possesses the Kingdom forever, even forever and ever." (Dan. 7: 18.) Thus, we leave Prof. Swift in contra-distinction with the Word of the Creator.

CHAPTER XVII.

Circumnavigation.

IN fig. 33, following, there remains a fair illustration of the circumnavigation of a globe. The captain of a vessel at 45° north on the 21st of March, wishing to take his vessel south, and knowing that the sun is vertical on the Equator, and wishing his exact bearing, prepares to take observation; at twelve o'clock midday where must he look? Now, all navigators will tell you that his sun will be seen at 45° arc or altitude in the direction of D. Now, if we put the sun five times as far away as what plain geometry demands, he is no better off in getting approximately what he knows he must have, if he knows anything. He well knows his sun must be on the angle C in the direction of D, but lo! his sun is at E, and is setting at noonday, for it is on his horizon line. Again, we suppose him sailing on a level sea and at 45° north (see fig. 34), half way between the Equator and north center, and his observation is all right, his angle is 45° arc — no trouble here. Now it may be claimed, by the inexperienced, that as before stated, I have deceived by placing the sun too near the earth. Well, if any man can place the sun, or North star, or any other object in any other place, on a globe, and yet have an angle of 45° arc from 45° latitude, I would give something for the information of how to perform the act.

Some who hold the earth to be a globe affirm that they *know* the earth to be a globe, "because they have sailed around it, and nothing but a globe can be circumnavigated." But we will give another verbal illustration: We take a square block or surface, place a powerful magnet in the center; then take a

this matter. As the sun makes its journey to and from the same place every twenty-four hours, we will start at the arrow 24; let the arrow 24 represent a locomotive traveling fifteen degrees every twenty-four hours, while of course the sun

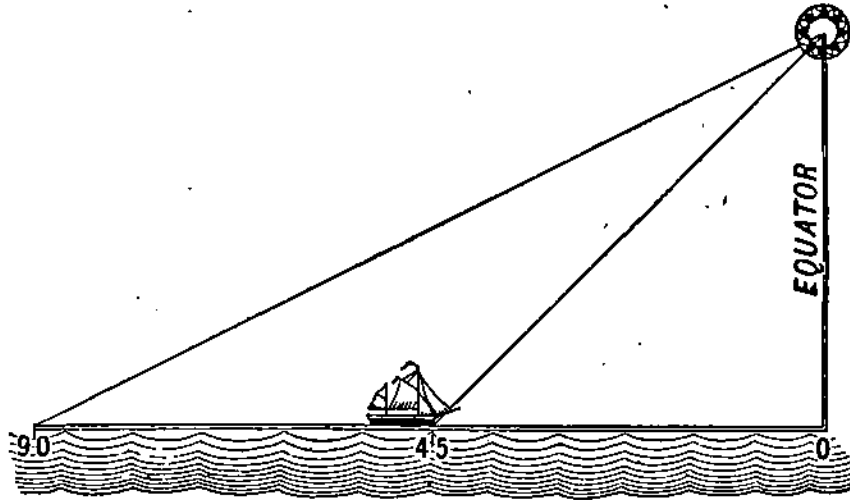


Fig. 34.

travels 360 degrees in the same time ($15^\circ \times 24 = 360^\circ$). At precisely twelve o'clock noon the sun's center *o* is on the line at 24 and the arrow or locomotive has reached or traveled fifteen degrees to fig. 1. Five days more pass, the arrow is at fig. 6

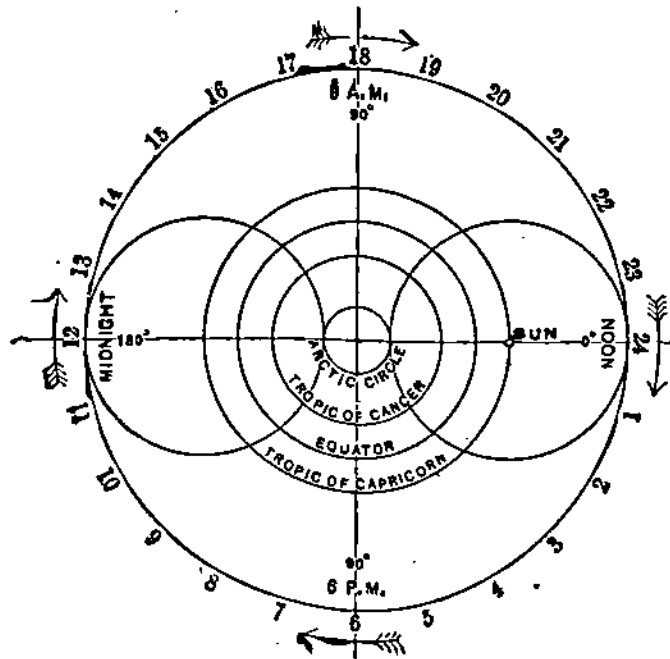


Fig. 35.

at the same moment that the sun is at 24 NOON (o). Another six days pass and at MIDNIGHT the locomotive is at 12; the sun at 24 (o). Now as we pass this line 12 with the locomotive we drop out a day in order to have the reckoning correspond with *sun time*, because as we pass the line 12 we have accomplished over half a revolution of the sun, or in other words, while we have been traveling in company with him, we have enjoyed twelve hours more of his light than we would had we stood still. And had we been traveling the other way at the same speed we should have gained the same amount of darkness that we gained light going the other way. Again, it is light that *chases darkness* around the world, and happy is he who walks in the light.

Declination of the Polar Stars and Other Objects.

Another phenomena supposed to prove rotundity is thought to be the fact that the North Star sinks to the horizon as the traveler approaches the Equator or passes, when it becomes invisible. This is a conclusion premature and illogical. Were this the fact it is only the ordinary law of perspective for an object to appear lower and lower as it recedes. Stand by the telegraph pole, close by—you have to elevate your head to see the top; at half a mile it appears on a level with your vision, although it be somewhat up-grade. “If we look in the *Times* of May 13, 1862, in the Naval and Military Intelligence, we may read as follows: ‘On April 19th, in latitude $23^{\circ} 53'$, longitude $35^{\circ} 46'$, Captain Wilkins reports that the Southern Cross and Polar Star were both distinctly visible at midnight.’ In the event of this being an error of some kind, we may state that we have heard from the lips of Captain Edward Gillit that he has observed the same thing between the 12th and 13th degrees of south latitude.” Carpenter’s “Common Sense Astronomy,” p. 47.

Inasmuch as the foregoing paragraph has been denied by some, and the affirmation made like the following—"It is claimed by navigators that the North star is observable only when three degrees north of the Equator"—we prefer always, inasmuch as it is possible, to let our opponents fix their own terms; by so doing a reasonable man is better satisfied of his inconsistency, when he condemns himself by his own logic.

By referring to fig. 33 it will be seen that we have placed the Pole Star about four times as far from the globe as the actual triangulation requires. From the dark side of the globe and on the Equator we have marked off three degrees (3°), according to the claim of our opponents; from the third degree, counting north from the Equator, we have run a dotted line to A, which is the proper place for the Pole Star, as it is co-equal in altitude and distance with the sun when the latter is on the Equator. In doing this we have run under a body of earth or seas 666 miles in depth and about 3,500 miles long. But with the truth we can be liberal; therefore, we have placed the star at four times the required relative distance from the earth, and there is about 300 miles of earth above the line, which passes through 1,500 miles of earth. Again, we arise from the earth to a distance of six degrees of the circle to the dotted line, J. Now, six times sixty (for they are miles) equal 360 miles high above the earth, in order to see the North Star if the earth were a globe!

Refraction of the Atmosphere.

Inasmuch as there exists in the minds of some a great amount of incredulity, lest we have not made due allowance for refraction, it may not be out of place to say a few words, also to give, so far as known, the existing laws which govern conditions and existing contingencies, by which it is possible to make any allowance. We will first give the views of a

scientific source, and their tables for the same, that every man can choose for himself.

The "Encyclopædia Britannica," article on "Levelling," says: "We suppose the visual ray to be a straight line, whereas, on account of the unequal densities of the air at different distances from the earth, the rays of light are incurvated by refraction. The effect of this is to lessen the difference between the true and apparent levels, but in such an extremely variable and uncertain manner that if any constant affixed allowance is made for it in formula or tables it will often lead to a greater error than what it was intended to obviate. For, though the refraction may at a mean compensate for about one-seventh of the curvature of the earth, it sometimes exceeds one-fifth and at other times does not amount to one-fifteenth. We have, therefore, made no allowance for refraction in formula."

By the above we see that the "Brittanica" did not consider it necessary to make allowance for refraction; yet, whilst some others who may be considered authority have done so, we will give such as we have, but will say that refraction can only exist when the visual line of sight passes from one medium into or through another of different density, and it is usually (or perhaps I may say always, for such has been my experience), when the beholder is standing in a more rarefied atmosphere than that into or through which he is beholding. Such are the conditions of a mirage or refraction, though the mirage of an object is usually inverted.

The amount of refraction allowed by ordinance surveyors is one-twelfth of the altitude of the object observed at the horizon. Now, it is a well-known fact that our horizon distance—while there are various tables giving such—is not always the same to the same eye, inasmuch as the conditions of the atmosphere govern, to a more or less extent.

In March, 1888, the writer visited a point of land known as Sturgeon Point. Its promontory extends into Lake Erie, and is eighteen miles, direct line across the bay, from the City of Buffalo, N.Y. The sun was shining bright, the ice which lay in the bay and harbor was fast thawing, and a perceptive vaporish atmosphere arising between the point where I was located and the city. Over the city rested a heavy cloud of smoke, mingled with the steam of many passing locomotives, which are in constant transit around the city. With our telescope we could locate many of the prominent buildings, such as the transportation warehouses, elevators, etc.; but with the unaided eye, we could at intervals, when the steam of passing trains lightened the smoke over the city, behold all that portion of the city lying along the harbor inverted in the atmosphere. Sometimes the inverted mirage would rest on the roofs and pinacles, or the tops of their substances, and then again they would rise as the smoke and steam would rise from the city. As the wind would gently move the aqueous substance, so would the panoramic scenery change.

DISTANCE, MILES.	CURVATURE IN FEET.	CURVT. AND REFRACT'N.
1	0.666	0.575
2	2.666	2.283
3	6.000	5.141
4	10.675	9.150
5	16.675	14.291
6	24.083	20.583
7	32.683	28.167
8	42.691	36.591
9	54.025	46.031
10	66.700	57.175
11	80.708	69.175
12	96.050	82.325
13	112.716	96.616
14	130.732	112.058
15	150.075	126.633
16	170.750	147.191
17	192.766	165.225
18	216.108	185.233
19	240.783	206.391
20	266.800	228.683

The most beautiful of all this scenery was this: At about two miles or more north of the described view and the city proper, stands the International Bridge, between the Canadian and American shores, across the Niagara River. While this lay behind a point of land on the Canada side and our position, we could distinctly observe the mirage of the bridge, with its beams, piers, braces, etc., and an inverted train

of cars in transit—all suspended in the atmosphere above.

On the preceding page we present a table showing difference of apparent and true level, or the supposed curvature of the earth with and without refraction; further illustration is given in diagram, fig. 36.

Navigation. Distance and Dip of Horizon.

FROM DIFFERENT HEIGHTS ABOVE THE SURFACE OF THE OCEAN.

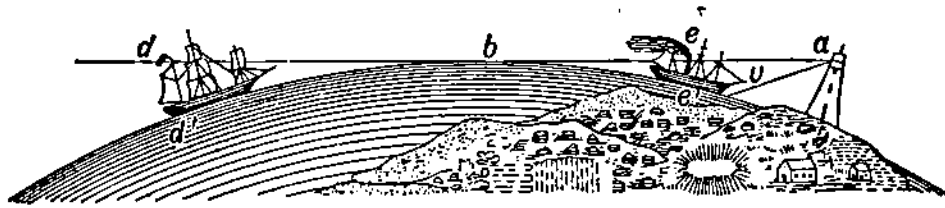


Fig. 36.

For similar heights see Curvature of the Earth.

The refraction is included in the dip of horizon, the distance being the tangent $a b$ in statute miles, at the elevation of a , in feet.

EXAMPLE 1. The lighthouse at a is 100 feet above the level of the sea. Required the distance $a b$. Height, 160 feet=13.23 miles.

EXAMPLE 2. The flag of a ship is seen from a in d . Required the distance $a d$, when the flag is known to be fifty feet above the level d' of the sea?

Height of the light 100 feet=13.23 miles $a b$.

Height of the flag 50 feet= 9.35 miles $b d$

Distance to the ship..... 22 58 miles $a d$.

EXAMPLE 3. A steamer is seen e ; the horizon b seen in the masts is assumed to be sixteen feet above the level e' . Required the distance to the ship?

Height of the light 100 feet=13.23 miles $a b$.

The assumed height 16 feet= 5.29 miles $e b$.

Distance to ship..... 7.94 miles $a e$.

The last table for curvature and refraction, together with distance and dip of horizon, and the examples 1, 2 and 3 are fac-similes of what may be found in an English standard work, twelfth edition, by John W. Nystrom, Philadelphia, entitled, "Mechanics and Engineering."

On the above we have a few remarks.

First: We have published the table of curvature for the benefit of those who believe that there is an existing curvature or convexity to water, or in other words, that this earth is a globe 25,000 miles in circumference.

Second: We have published the same for the benefit of those who know better as well as for those who wish to investigate; and

Third: We wish all to know the fraud that is practiced upon the credulity of the unsuspecting community and the rising generation in the public schools. Such illustrations and fraudulent misrepresentations have become by far too prevalent in our public schools.

First, we notice by placing a protractor on the illustration, that the entire length of the scale is 65° of the arc of a complete circle. Now, 65° at sixty miles each = 3,600 miles. From the water to top of lighthouse is 5° = 300 miles high. From the water to the top-mast of the most distant ship 300 miles! From the lighthouse to the farther ship is 37° which equals 2,220 miles, on the globe hypothesis, or any other theory or fact, where proportion is used. In conclusion, we only have to say, that the only thing in the diagram or scale that even approximates to the truth, is the "examples"; and they are based on a hypothesis, which is only a supposition and can be of no practical value whatever further than the exercise of mathematics.

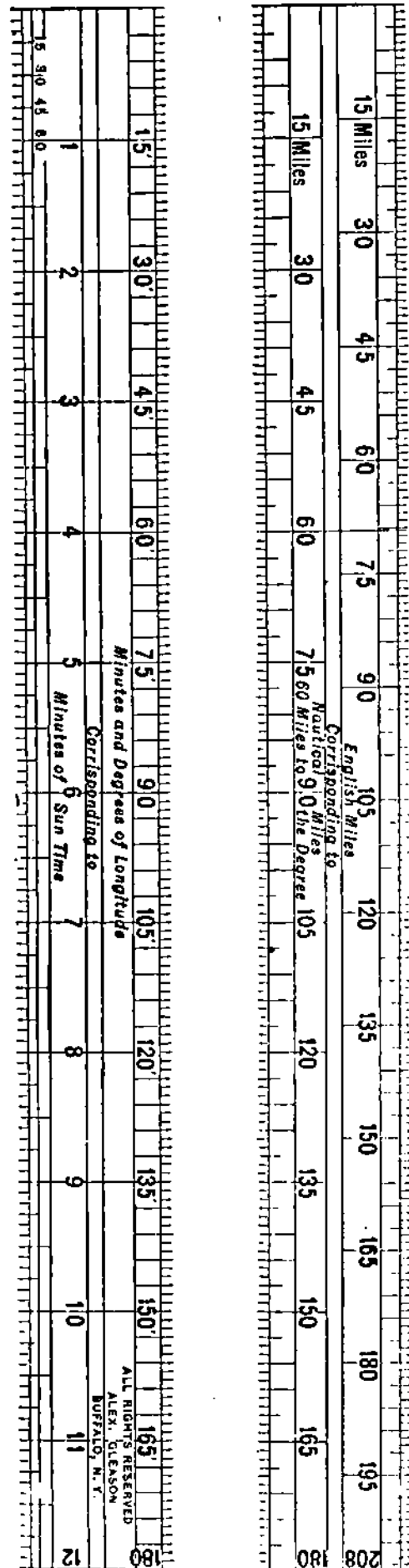
For the benefit of schools, etc., we give English miles corresponding with nautical and geographical miles. Fig. 37 gives the relative difference between English and nautical, or geographical miles. The first line of divisions, in fig. 37, it will be seen runs from 1 to 208 miles. Of these there are 69 and 16-100 to each degree of longitude (on the Equator), as represented on the lower edge of fig. 37. It will be further noticed that 208 English miles are equal to 180 nautical, sea, or geographical miles.

In figure 38 we have first, as will be seen by laying a straight-edge across the two scales, figs. 37 and 38, on the lower edge of fig. 38, 15, 30, 45 and 60 seconds, or one minute sun time, 15' Solar, which equals 15 nautical miles or $17\frac{3}{4}$ English miles. Thus, both Sun and Solar measurements of time and distance can be computed to any extent by the simplest rules of arithmetic.

Comparison of Longitude and Time.

Since the sun makes his revolution through the heavens and above the earth in twenty-

Figs. 37 and 38.



four hours, from east to west, or through 360° of longitude, it follows that in one hour he passes one-twenty-fourth of 360° , or 15° ; in one minute of time through one-sixtieth of 15° , or $15'$ arc, and in one second of time through one-sixtieth of $15'$ arc, which is equal to $15''$ arc.

COMPARISON, FOR A DIFFERENCE OF.

15°	in longitude, 1 h. in time.....	900 longitude miles.
$15'$ arc	" " 1 m. "	15 " "
$15''$ " "	" " 1 s. " 1-60 of 15	" "
1° " "	" " 4 m. " or 60'	" "
$1'$ arc	" " 4 s. " 1-360° or one mile.	
$1''$ " "	" " 1-15 s. " 1-3600° of	" "

The English land or statute mile is 5280 feet. The nautical, sea, or Solar mile is 6075 feet.

A New Circular Map of the World, and Longitude
and Time Calculator.

We have prepared A NEW MAP OF THE WORLD AS IT IS. The map is finely executed and printed in six colors. It contains all the continents and principal islands and rivers of the world, also, all the principal cities of the earth. The circle of the map is fourteen and one-fourth inches, having a time dial on which is marked in bold Roman numerals the twenty-four hours of the day and the minutes of the hour. The face of the map is provided with two detached radiating arms from the center to the circumference of the time dial, the arms are held together by friction, having a pivot socket at the center of the map. On the arms is stamped the degrees of latitude; by the operation or moving of these arms the relative time of day or night is quickly determined and read on the dial by the child or person who can read the multiplication table, or tell the time of day by the hands of a clock. Latitude and longitude, and the existing difference of time between any places may be determined *without the aid of figures* in a moment's time after the places have been located on the map.

The great advantages to the child or pupil are these: The whole world is before the person, with all its continents, countries, etc., in their detail and relative location, the one to the other; and so is the geography of the earth and seas established in the mind.

The map should hang in the house of every family in the land as well as every office or public place. The Publishing Company have ready a large wall map for school rooms and public places. The company will not only supply the United States, but the world, and very soon the Globe map and Mercator's projection will not be found. As a useful commodity they will not exist, and if any existence of them should be preserved, it would be but a memorial of that pagan idolatry from which the nations had evolved.

The hypothesis of the motions of the earth and planets around the sun were not original with even Copernicus, as has been claimed or supposed by some. According to mythological tradition, Pythagoras, the sun worshiper, was the medium through which the devil operated, to bring into requisition the present godless adorations of the inventions of man—godless, I say, for such ideas as the founders of the system possessed and taught, I am safe in saying, never sprang from a Divine source. It is but simply a matter of justice that I mention the source of this pagan institution.

In the opinion of Pythagoras, God is the universal spirit, diffused in all directions from the center, the source of all animal life, the actual inward cause of all motion. To the Divinity there were subordinate three kinds of intelligences, gods, demons and heroes—emanations of the supreme, varying in perfection and dignity, in proportion as they were more or less removed from their source. The heroes he believed to be

clothed with a body of subtle matter. Besides these three kinds, there was a fourth—the human mind.

The regions of the air, the Pythagoreans thought, were filled with spirits, demons and heroes, who were the cause of sickness or health to men or animals, and by means of dreams and other kinds of divinations, imparted the knowledge of future events. Of man they believed that since he consisted of an elementary nature, a divine or rational principle, he was a microcosm; that his soul was a self-moving principle and consisted of two parts—the rational, which was a portion of the universal soul, an emanation of the central fire, and had its seat in the brain; the irrational comprising the passions, which had its seat in the heart; that in both, man had something in common with the brutes.

Pythagoras taught that he who devotes himself to this study is a philosopher. For this purpose it is necessary to invoke in prayer the assistance of the Divinity and good demons. For the facts see "Pythagoras" in any encyclopædia.

CHAPTER XVIII.

Perspective Laws and Vanishing Points.

IT is a well-known and universally-accepted theory, with astronomers and scientists, that any round body, whether celestial or terrestrial, vanishes or disappears visually at a distance from the beholder of 3000 times its diameter.

In this case, as in every other, we will only use their own words and illustrations in order to "vanish" their paganistical and idolatrous theory.

Truths, though a thousand, hold good together;
Falsehoods, no matter how many, no, never.

First, we give the statement of Dr. A. Wilford Hall. In his journal the *Arena*, of September, 1887, he says: "Any round body, whatever its size, will be reduced to its perspective point in receding 3000 times its own diameter from us."

In order to speak from demonstrated knowledge in the matter, we made three small targets as follows: One, one-half inch, and pinned it on a board of dark background; secondly, two more of the same size as the first. These last two we placed their edges together as shown in fig. 39. Tacking these up some three feet from the first, we prepared the third complete circle, one inch in diameter, and fastened the latter about the same distance from the second as was the previous two apart. Now, as 3000 half inches equal 125 feet, we measured the distance with a ten-foot pole, and found that with some difficulty we could just discern the first

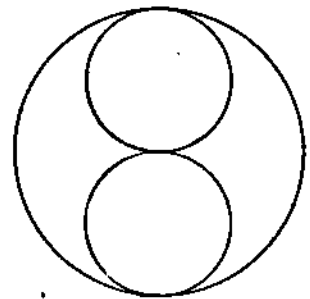


Fig. 39.

target. The second target, of two half-inch circles together, were easily distinguished at about 260 feet, while the inch circle was discernible about 800 feet. So we see that it is the increase of area that has more to do with the vanishing distance than has the increase of diameter in a round substance, as we have shown. The half-inch circle contains .1963 area, while the inch contains .7854 area, nearly four times as much area as the half-inch, and seen nearly four times as far. Theory is good—yes, excellent, when founded on correct principles; otherwise it is equal to feeding the horse sawdust for meal. But we will look into this law of perspective a little farther.

In both Lockyer's and R. A. Proctor's "Elements of Astronomy" is a representation of Jupiter and his four moons, sizes, distances, etc., and Mr. Proctor says they have been seen without the aid of a telescope. The following, fig. 40, is an illustration of the same.

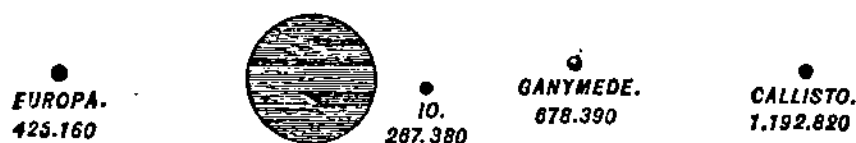


Fig. 40.

Inasmuch as these men are representative men, and publishers of standard works, not a few for our schools, etc., the bare-faced imposition upon the unsuspecting pupils is too manifest and too tempting to the investigator to let pass. Were these statements and pretentious measurements made by a novice we could let them pass. The error demands exposure, though the men are dead and gone. If we turn to page 296 in "Lockyer's Elements of Astronomy," appendix table of distance from the earth, etc., we will find marked "Jupiter's least distance from earth, 408,709,000 miles from the earth." Now, the diameter is given at about 85,000

miles; 3000 times this equals 255,000,000 miles as the vanishing point of Jupiter. This, then, requires, according to these men's own words and figures, that Jupiter be placed 153,709,000 miles further than they claim it to be. So we see again that two errors, though confirmed by two great authors and believed by all the world, do not make one truth, nor come within a million miles of an approximation to the truth.

As the distance of Jupiter's satellites from their primary are given in fig. 40, their diameters are given as follows:

Io, 2252 miles; Europa, 2,099 miles; Ganymede, 3,436 miles; Callisto, 3,057. We will give another sample: Take Callisto's diameter, $3057 \times 3000 = 9,171,000$ miles; add this latter to Jupiter's least distance from the earth, which Mr. Lockyer gives as being 408,709,000 miles, and we have the little satellite removed from the earth, four hundred and seventeen million, eight hundred and eighty thousand miles from the earth (417,880,000), and yet Mr. R. A. Proctor says they (Jupiter's moons) have been seen without the aid of the telescope. I can say that I have seen all of Jupiter's satellites with a small field glass of not more than six or eight powers, and I can further say that plain triangulation proves all of those theories, in regard to distance and dimensions, millions of miles in excess of facts. But, say some, should we not be charitable to our opponents and believe that it is the area of the body instead of the diameter that demands 3000 times its surface for its vanishing distance? Yes, I think so; this is what our first and only experiment proved to be, approximately, the truth, but most bodies contain more area than diameter; therefore, it would not help their side of the question. The sun's disk, for instance, with all his system is on less than one-half its area.

I know of no round body whose diameter is greater than

its circumference, unless it be that animal's body anciently spoken of, which it was said "was possible to go through the eye of a needle." There is known to exist the diameter of a circle whose circumference is equal and no more than equal to itself. Four inches in *round numbers* is the maximum; it stands in the desimals thus: Four-inch circumference, 12-566, four inch area, 12-5664. Below four inches, circumference exceeds area; above four inches, area exceeds circumference. Thus, for instance, three inches diameter contains 9-4248 in circumference, while the same contains 7-0686 area. The other side of four to five the circumference is 15-708, the area of the same is 19-6350, but no maximum is known for the co-equal of diameter and area.

Transits and Eclipses vs. Orbit of the Earth.

As we have desired to notice the oft-repeated assertions in regard to the shadows of the earth on the moon (the earth between the sun and the moon is the equivalent), we will try and make the matter plain in this article.

Mr. R. E. L. Lovell, of Vadis, W. Va., kindly sent us an article which he wrote for a Tennessee paper, *The Busy South*. Such portions as bear on the subject and are not a repetition of what I have written, I gladly publish and illustrate by a diagram further on in the subject.

First: "Just now, the papers are giving lengthy articles from astronomers, whose fertile imaginations are constantly evolving some new theoretical speculation. They are now talking of men and their doings, who, they claim, inhabit the planet Mars—that red star, so discernible at times, in the sky. Early in August of this year it was given out by American astronomers that they had discovered on the southwestern limb of Mars, three bright lights, forming a triangle, which would

flash up brilliantly for a time, and then suddenly disappear. In the official report from the Lick Observatory, Monday night, August the 8th, it was stated: 'Last night on the south polar cap very complex and numerous dark markings were visible. The unique spectacle of markings in the snow caps has been noted not only with the large telescope, but with the twelve inch by Barnard, who some time ago observed that on one night a dark streak would appear across the polar cap, and then would follow a separation, and then the disappearance of a large portion of the polar cap, leaving two white spots.' The great Milan astronomer, Prof. Schiaparelli, has also discovered numerous and extensive canals cut in Mars, he claims. The *New York World* of August the 10th, whose correspondent had interviewed the professor, says: 'Schiaparelli was the first person to give definite basis upon which to rest the belief that Mars was inhabitable by a highly civilized race. He discovered that the surface of the planet was intersected by a large number of canals. It was apparent from the map he drew, that these streaks were real canals because they were perfectly straight; were obviously artificial because they did not recur on any of the other stars. It took all of Schiaparelli's keen eyesight to detect their two parallel banks.'

"What a pity! Now, if the professor had only used a portion of his eyesight to discover the people who cut those ditches, he would have had a stronger story. We read further in the paper mentioned, that the astronomers not only believe that the lights, lines, etc., are an arrangement to signal us on the earth, and that they are also trying to think of some means to answer them, but that 'apparently these black streaks which move so mysteriously, yet with a seeming method, over the frozen polar plainly concentrate at the pole itself. This would be natural under the circumstances, as if great ropes or blankets

of some dark substance had been tied or anchored at the poles, and were being swung from their lower ends.' How very ingenious! Ropes, blankets, flash-lights, canals and their banks, clearly outlined!

"Astronomers who talk of seeing those things as though but a few paces off, would certainly be in possession of 'keen eyesight,' when we know that they place the distance of Mars from the earth at 35,000,000 miles! But what about the people they might have seen, also? Well, when it comes to such speculations as they indulge in, they need not despair about the people, for they can be exactly located in some way. Let us see—we once heard a gentleman say that at regular intervals of a certain number of years, that where there are mines or large deposits of precious metal, such as silver ore, it would throw off a gas, which, coming in contact with phosphore becomes ignited, giving a very brilliant light. Then, since astronomers have declared that they have found iron, sodium, salt, etc., in the sun, why not Mars be a vast ball—say of gold; this would help them to account for its bright appearance, different from any other star. The burning of the gas will prove the metal, and account for the jack-o-lantern lights they have seen. The ditches they have mistaken for canals show where the people have been getting out—or rather, taking in, the precious metal; for, since the men are not seen on the outside, it is evident that they live on the inside. As authority also for this, we have but to call up the great novelist, Lord Bulwer-Lytton, who has predicted a mighty people in the bowels of the earth, in his book called 'The Coming Race.'

"So, having them once located there, the moving of the southern cap, which from its color was thought to be snow, is only a trap door made of refined metal. The spots which

its moving exposes, are the furnaces and fires of the refiners. Now the idea would be, not to make known to them that they have been discovered, but to make a rush upon them and capture their treasure. Jules Verne, the famous Frenchman, who is the author of 'A Trip to the Moon,' can readily concoct a scheme for the astronomers to get there and bring the gold away.

"So much for speculative astronomy. And 'tis just as rational as the Newtonian theory of Creation, which says that the universe was once filled with flying particles, which gradually collected into atoms of matter, and these, through countless ages of time formed themselves into nebulous masses; which, after other ages, and as it were, by self-obtained rotation, became fiery suns; that many of these suns, after other countless ages, passed into what they term the planetary state, and became inhabitable; and that in this way the earth became what it now is.

"This is the text and basis of the popular and idolized system of Modern Astronomy.

"How the particle first came into existence, and why it did not continue to grow, are questions which of course astronomers are not to be required to answer. [Tell us the dream and we will tell the interpretation.]

"Well, let those who will, serve Baal; but let us follow truth. God tells us, in language unmistakable, how He created the earth, and the orbs of light for its use. 'In the beginning etc.,'—that is, when time commenced. God is a creature of eternity, and eternity knows no time. Time was instituted five days before man, for man, because he was made a creature of time.

"At the beginning of that first day, which was a day of twenty-four hours, as will be easily proven, God by His own

Almighty volition brought the world into existence out of a mingled mass of water, earth, etc., for we read that it was 'without form and void.' And it was not till the beginning of the third day that the complete separation of earth and water was brought about, and the 'dry land appeared,' and not till the end of the same day that the planets were created to give light, signs and seasons for the earth. In short, they are the great Clock of Time, and are performing their work perfectly, as we will notice. Hence, you see we had an earth before we had a sun or planet in the heavens, notwithstanding the Newtonian theory to the contrary. While it might take ages for the waves of the sea to toss up the sands of a continent, yet, who would deny that by the power of the Creator the earth was not brought forth in a moment. 'For He spake and it was done, He commanded and it stood fast.'

"So while geologists may figure on the slow process of evolution and germination, there was an Almighty power in the Universe which did bring about suddenly those things we behold. That power was God, and it would be just as reasonable to argue that the loaves with which Christ fed the five thousand had undergone the natural process of baking, as to rob God of His declared creation by belief in the Newtonian—Geological theory, however popular it may be.

"It may not be generally known that the astronomers have not been able to reconcile the different motions of the planets to completely harmonize with their orbital theory; but such is the case. Since Mars is a favorable subject just now, we will briefly take it for illustration.

[In fig. 41 let S represent the sun. The first circle from the sun will represent the earth's orbit with the earth in position at E. The outer circle will represent the orbit of Mars, at M July 29th, 1891; eight months later, March 29th, 1892,

and four months later still, August 3d, 1892, C at opposition. Hence we see the earth is stationary. Mars swings, to and from, far beyond the sun while moving in course with the other planets in her daily circuits around over the earth, her points being indicated by the rise and fall from horizon to

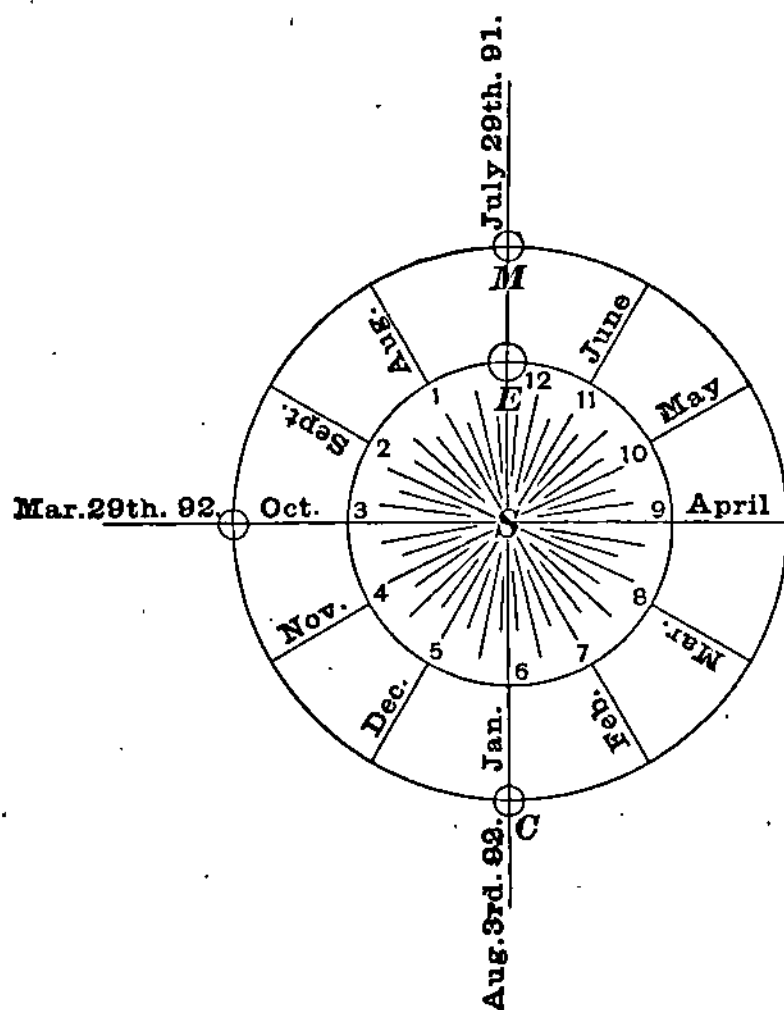


Fig. 41.

zenith and the position of the sun. Mars, like other celestial bodies, is filling an important place in the cycles of time as marked by the heavenly bodies. The comets, too, play an important part, but their strangely elongated orbits are an everlasting contradiction to the Newtonian theory of gravitation. This is a fact confessed by every astronomer of any note. Eclipses of the moon are caused by certain non-luminous bodies of the heavens passing between the earth and the moon,

recurring continually at regular intervals of about eighteen years and eleven days. That there are non-luminous bodies so circulating is admitted by Hershel in his *Astronomy*, p. 521.]

“There are also many other authorities. There are seventy different eclipses that repeat themselves every eighteen years and a fraction. This cycle of years, with their fraction continually repeated, makes up another cycle, which is an even one every 651 years. Thus, eclipses being but repetitions, their calculation is brought to a simplicity.

“Mr. J. B. Dimbleby, professor of chronology and member of the British Astronomical Society, in his work called “*All Past Time*,” has traced every eclipse back to the creation of the world and verified the fact that the Bible is the most accurate and scientific book that has ever been written. If a single day or date had been incorrectly given therein the error would at once be discovered. It also shows that the Lunar year of 354 days, in which the Biblical chronology is given, was just the same length without a variation at the date of the Flood. Mr. Dimbleby says: ‘The first eclipse of the sun took place during the nights of Friday and Saturday of the 1st and 2d of the fourth month in the first year of the world, or the year 0 A. M., which synchronizes consecutively with Friday and Saturday, January 11th and 12th, in each of the consecutive periods of 651 years. In 1861 A. D., the date was the first day of 5860 Astronomical, by counting the first twelve months as year 1 instead of year 0.’ [The reader will only have to turn to the tables in the first part of this book to find the tables of Mr. Dimbleby referred to.]

“No matter what the motion of the planets, or wherein their orbits, the opposition may occur, for they do not always recur at the same season of the year, it will be seen that Mars ought always be seen one-half her time on her half orbit repre-

senting her opposition, and the other half of her time on the side of her conjunction. But it has never occurred.

“Now we will take the same eclipse of January, 1861, and give an illustration of the application of the cycle of eighteen years and eleven days; of course there are a few odd minutes also, which, carried out fully, would account for the eclipse not occurring in the same latitude always, but this will be sufficient for the purpose:

$$\begin{array}{r}
 \text{Eclipse 1861} \text{---} 1 \text{---} 11 \\
 \text{Add} \quad \quad 18 \text{ yrs. } 0 \text{---} 11 \text{ days.} \\
 \hline
 \text{Result, 1879} \text{---} 1 \text{---} 22.
 \end{array}$$

Thus, the eclipse of the 11th of January, 1861, should re-occur January 22d, 1879.

“Now consult your almanac for that year and you will find it so given. Notable instances of the eclipses of the moon, mentioned by astronomers being seen when both the sun and moon were wholly visible above the horizon, and when the earth could not have been between the sun and moon, were observed July 17, 1590; November 2, 1648; June 16, 1666; May 26, 1868; July 19, 1750, and April 20, 1838. They attempt to explain this phenomenon by atmospheric refraction. This is deceiving, as we will clearly demonstrate. We quote from Quackenbos’, or you may consult any other standard work on the subject if you please.

“‘Refraction is that change of direction which a ray of light experiences on passing obliquely from a rarer medium to another. Rays from the heavenly bodies on entering our atmosphere obliquely from a rarer medium are refracted. Let a ray pass from air a rarer medium, into water a denser medium, and it is refracted.’ Quackenbos’ Natural Philosophy, p. 246-247.

"Hence, as the two conditions are parallel they must follow the same principle and be bent in the same direction. Now, in what direction are rays in air and water refraction turned? That we may not be questioned we will again quote from page 247, something, too, which all may prove:

" 'Place a coin on the bottom of an empty vessel, and fix the eye in such a position that it just misses seeing it on account of the vessel's side coming between. Keep the eye there and let water be poured in; the coin will then become visible.' Thus, the line from eye to coin falling over the rim of the vessel is turned downward through the water in the direction of your feet. Thus, the light from the sun passing into our atmosphere should, if the earth were a globe, pass over the curve of the earth downward and bring the shadow sooner to a point. This also destroys the idea, created by astronomers, of the earth's shadow being increased from 8,000 miles to 59,000 miles in diameter when it reaches the moon, in order to partially explain the eclipse, sometimes of about five hours' duration. But this, even, would not avail them, for with an axial motion of the earth of 1,000 miles an hour, together with an orbital speed of nineteen miles a second, the moon would quickly sail clear again.

"If the earth were a globe the North Star should disappear below the northern horizon as you pass beyond the Equator; but it has been seen from near the latitude of the Tropic of Capricorn. To account for this fact astronomers rush in again with 'refraction' turned the other way.

"Poor foolish men! Cannot they see that this destroys all their work they had wrought out for the moon? When the gun is shooting the one ball two ways at the same time, it cannot be said to center in the target for which it is aimed directly ahead. Better that they renounce it at once;

for that is coming to pass of which Dr. Woodhouse, professor of astronomy, Cambridge, about 1840 wrote: 'If our premises be disputed and our facts challenged, the whole range of astronomy does not contain the proofs of its own accuracy and must fall to the ground.'

"Wherever we look we see the followers of the sun worshiper, Pythagoras, plunged into a sea of difficulties on every hand. What must we conclude? Truly the Geologist's Creation is not God's Creation; neither is Newton's Laws God's Laws.

"The earth is a plane, 'For He hath founded it upon the seas, and established it upon the floods.' (Ps: 24: 2.) We have shown you the time from Creation, and in such a way that it forever overthrows every speculative theory, silences the idea of prehistoric animal creation, shows the purposes of the planets in being made subservient to the earth, and therefore, not habitable material worlds.

"We will close this chapter, as we begun it, with some appropriate Scripture: 'There is one glory of the sun, and another glory of the moon, and another of the stars; for one star differeth from another star in glory.' (1 Cor. 15: 16.) 'The heavens, even the heavens, are the Lord's; but the earth hath He given to the children of men.' (Ps. 115: 16.) 'The wise men are ashamed, they are dismayed and taken: lo, they have rejected the Word of the Lord; and what wisdom is in them?'"
Jerem. 8: 9.

R. E. L. LOVELL.

A Solar eclipse is the result simply of the moon passing between the sun and the observer on the earth. But that an eclipse arises from a shadow of the earth is a *statement* in every respect, because unproved and unsatisfactory. The earth has been proved to be a plane, always underneath the sun and moon, and, therefore, to speak of its intercepting the light of

the sun, and thus casting its own shadow on the moon, is to say, what is, according to natural laws, impossible.

The Rivers Nile, Amazon and Mississippi.

Another striking absurdity to the globular theory is the course of the River Nile, whose mouth is 2,000 miles higher than its starting point. The river starts on the Equator at Lake Victoria and runs *two thousand miles due north* and empties into the Mediterranean sea; the supposed incline of the earth would in fact require the river to lean or incline back from its bed. By looking at any map of Africa you will see that this river is over *2,000 miles high, vertical, and standing on its small end at that!* There are thirty more rivers in Asia running into the Arctic ocean. Surely, this *globular* world was a *great invention*.

At about twelve degrees below the Equator, the tributaries of the River Congo and the Nile commence their northward course and terminate at Alexandria in Egypt, thirty degrees north of the Equator. We go west of the source of this mighty river about 75° of longitude and we find thirty tributaries of sufficient note to be laid down on a six-inch globe map; and many of these rivers bringing their waters from over one thousand miles south of the Equator and depositing into the Amazon, whose mouth is on the Equator.

All of this the globe theorists think to account for by the laws of gravitation. But we will go a little farther north before we return. Go into Asia and we can again count thirty rivers flowing into the Arctic ocean.

Now return to the mouth of the Nile, which is thirty degrees north latitude; from thence 120° of longitude west, on the same line of latitude, to the mouth of the Mississippi. This last, but second longest river in the world has brought its waters from 50° north and deposited on the same line of longitude of the Nile. How is this for gravitation?

CHAPTER XIX.

Degrees of Longitude, South vs. North—the Equator.

A CHALLENGE CONSIDERED.

WE propose in this chapter to notice the propositions and challenges that we have had from numerous sources to prove the earth a plane, in view of alleged and supposed facts, that the degrees of longitude south of the Equator converged into one common center at 90° south. The above requirements are but just and logical, so far as supposition or hypothesis is concerned. In order to show that the challenges are not imaginary, we will just give a few extracts from one who has claimed to entertain esteem for us, only with the exceptional consideration of our heretical views in regard to the earth a plane. For these, however, we expect collocation by many of our friends. As a *considerativo* we will first give the extracts, and consider them the propositions which we will adhere to:

NEW YORK, August 11, 1891.

Alex. Gleason, Buffalo, N. Y.:

“DEAR BROTHER—I have been thinking about you a good deal since I saw you at Fulton, and wondering how you were feeling over the flat earth by this time.... The *idea* that I should ever believe that this earth was flat instead of round as the Creator formed it, or that anybody should ever gather the idea from anything that I have said, that I believed any such nonsense, is, beyond all question, *supremely foolish*. I never did believe it, and the more I study it and understand the true philosophy of the earth, its form, motion, etc., the more firmly I am convinced that my early education was accurate in

that regard, and the more real, pure and *unadulterated nonsense* I see in the fallacious arguments and would-be points made by the zetetic astronomers.

(a) "Unless you can show me a diagram representing the flat earth, lighted up by the sun in some way that three-fourths ($\frac{3}{4}$) of *any one* of the parallels of latitude south of the Equator is covered at the same time; (b) and until you can show me a government map, made by men of education and learning, in which the meridians of longitude diverge to the south, south of the Equator; (c) and until you can prove that it takes ships longer to pass over a degree of longitude south of the Equator than it does to pass over a degree in the corresponding latitude north of the Equator; (d) and until you can explain clearly, logically and philosophically how there can be equal night and day from *pole* to *pole* at one and the same time; (e) and until you can make a telescope that will bring a ship back to view after it has disappeared over the water in clear weather, and a host of other propositions as unanswerable according to the flat earth theory, please do not state to anyone that Bro. —, of New York City, leans toward the flat-earth theory. How could I believe it when I see so much in it contrary to the natural laws of philosophy, astronomy, and every-day experience of thousands of men who sail the seas. (f)

(g) "I hope our little interview at Fulton has had the effect to put a new idea at least in your mind. (b) I ask you as an honest man, as I believe you are, to drop the investigation of the flat earth theory with which you find so many common philosophical propositions hard to harmonize, and for a short time *concede the fact* that the earth is round, and then see how many philosophical problems will need to be explained to harmonize with it. (i) Just consider it, I say, for a short time, and see if all these matters do not harmonize perfectly with science both philosophical and astronomical, and also with the experience of men who navigate the seas, especially those south of the Equator. (j)

"I believe, Brother Gleason, that this theory is (k) 'a child of the dark ages'—in fact, I am quite sure it is; for going be-

yond the Christian Era we find the first man who predicted an eclipse was called Thales, who lived 600 years B. C. ; (l) I say he was the *first man* to predict an eclipse which came to pass at the appointed time, and this man Thales, believed in and taught the sphericity of the earth, but later on when we come to the thirteenth century is where we have strong historical testimony that they believed the earth to be flat.

(m) "*When Columbus conceived the idea* [!!] that the earth was round they mocked him and laughed him to scorn for thinking so. Notice also Galileo in the same. (n) I believe in my heart it is from the enemy who is trying in every way to deceive us, to prejudice minds against the truth and influence the servants of God. If I had not met you and talked with you, so that you know who I am and I know who you are, I would not thus take interest in writing you. I want to see Bro. Gleason be himself again, as he was before this idea reached him.

"If you have time and it is convenient for you to write me a few lines I shall be very much pleased to hear from you."

Yours very truly,

We do not offer a public reply to this kindly-disposed letter because of any feelings of retaliation, but because, first, we believe there is not one demonstrated fact existing that cannot be demonstrably explained on the principle of the earth a plane, if the fact is a relative one, and explainable on any known principle.

At the writing of my friend's pertinent letter I did not have some of the demonstrated facts from just the standpoint from which he, with others, demanded; therefore, I have carefully retained his good letter, though I did not cease my investigations according to his importunacy together with many other earnest solicitations and sarcastic denunciations. The truth has not yet spoiled, and we have it fresh and beautifully harmonious to-day. And as we now think that this illustration will be

our last one by diagram for this book, though by far not minor in importance, we kindly ask the reader to follow us through carefully and patiently, noticing the evidence from that source required by our opponents, or those, who like ourselves, have demanded proof and nothing "conceded." As we have lettered the points in our friend's letter, we will notice them in order. For the first designated as "a," we will refer the reader to chapter fifteen of this book, diagrams 26, 27, 28, and as he, with others, require some government or official authority, we give Prof. J. Morrison, of the Bureau of Navigation and Navy Department, Washington, D. C., and the Encyclopædia Britannica and the navigators' records of South-sea voyages, etc., by Sir James Ross. The corresponding nights and days in South-sea latitudes, of which he referred to, will be found in the same chapter; this also covers requirement "b."

A few of our most radical friends have made the following very fair proposal and concession, namely: If it can be shown that the degrees of longitude are *less* in Australia or *anywhere* south of the Equator than upon it, there can be no question but that the earth is a globe in form, and if it can be shown by actual measurement that these degrees of longitude lengthen or diverge from each other as we go south from the Equator, it must, with equal force and reason, be admitted that orthodox geography is untrue, and the supposed configuration of the earth a myth.

We are now ready to offer our final evidence for the consideration of all parties.

Following is the coast tracing of the west coast of South Africa, also eastern coast of South America, each bearing its relative position to each other in both latitude and longitude, and relative positions on the Equator. We style the illustration fig. 42. We will further state that this tracing is from a

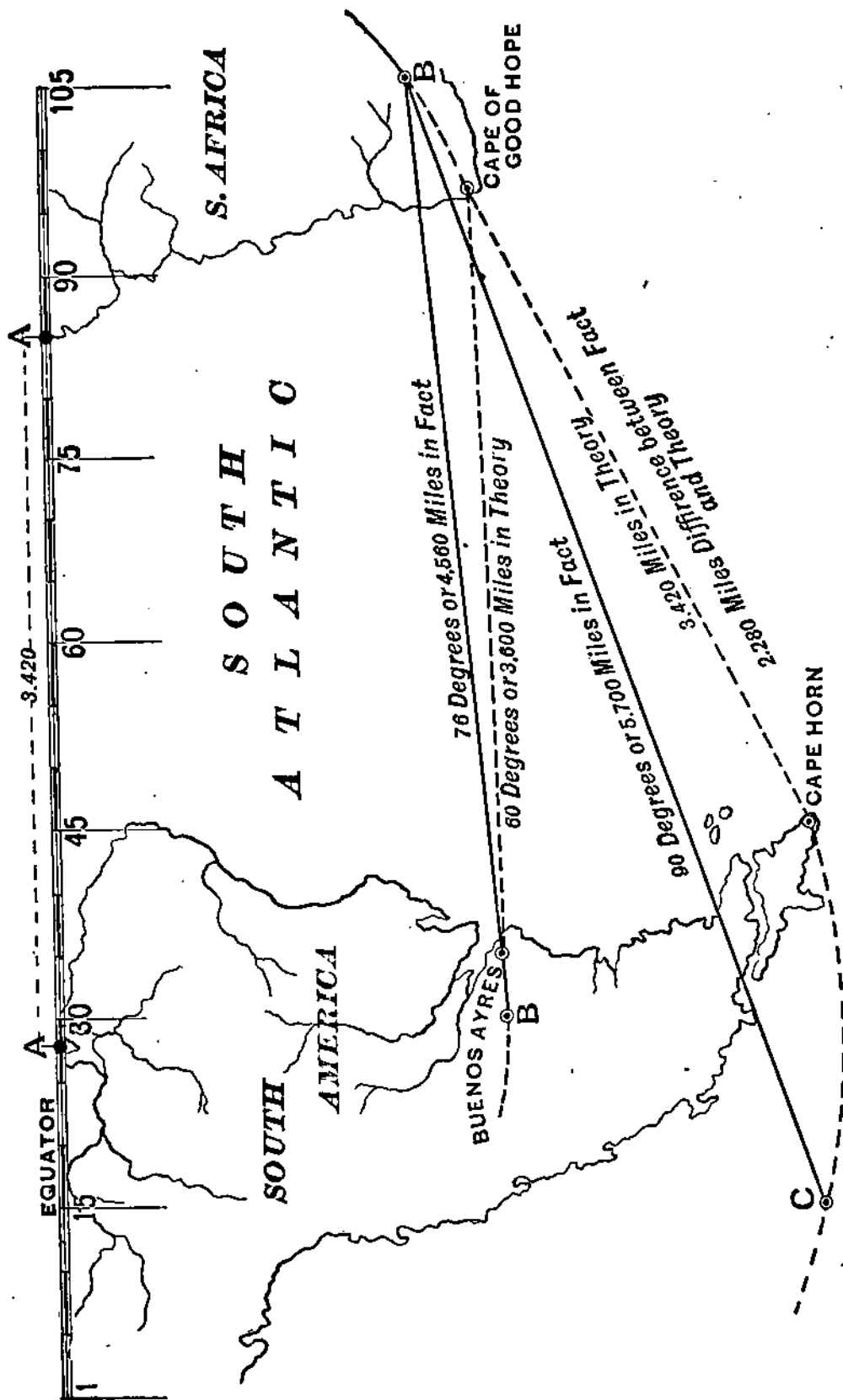


Fig. 42.

small-sized globe map, which we preferred for convenience, but it will be found to agree very closely, so far as relative coast-lines, latitude, longitude and distances are concerned, with the best maps known.

We have made a scale of degrees of longitude from Washington east to the meridian of 105° on the continent of Africa. Now, if we take the extreme distance on the Equator between Africa and South America, we find it to be 56° of longitude, and these equal 3,360 miles from A to A on the scale, but if we allow the globe theorists all they claim for curvature, it would be about sixty miles more, and thus it stands on the scale, 3,420 miles. Now, if we measure the distance between Cape of Good Hope on the scale and Cape Horn, we will find the two distances to very closely agree. Now, if one inch represents one thousand miles on the Equator, on water, it certainly represents one thousand miles in every other place on the same globe scale. We next take the distance from Cape of Good Hope to Buenos Ayres, which is 60° or 3,600 miles, according to the same scale or any other globe scale in the land made by "scientific and educated men." So much for authentic theory, and we will next see what the authentic, practical, and experienced navigator says in regard to these distances and *the very shortest time* ever made between these places by the best class of steamships, built by the best builders that Europe affords, and at the expense of the East India Government.

In order to procure these facts it has taken considerable time, and no expense has deterred us from securing facts which is now a great relief and pleasure to give to the world. We trust the reader will bear patiently with us while we give the demonstrated facts in the case.

About the middle of November, 1891, I put the following notice in the *New York World*:

Wanted—The address of an unlimited number of navigators or sea-faring persons who have made the voyage or voyages between the following places, and can give the distances in knots, and approximate time in days, of making the several voyages: No. 1—Cape Town, Africa, to Buenos Ayres or Montevideo. No. 2—Cape Town, Africa, to Cape Horn, etc.; others of which we will not take time to mention, of which we have time, measurements, etc.

From the most experienced, or he who furnished the best references, we selected the information; no one knowing for what purpose we wanted the desired knowledge, or anything in regard to our views. The following became my informant in regard to the desired information:

53 WOODWARD AVE., SOUTH NORWALK, Ct., }
November 23, 1891. }

Alex. Gleason, Esq.:

DEAR SIR—Seeing the inclosed [which he cut from the paper advertisement] I wish to say that I can give you the required information, having served in the Cape Horn, west coast of South America, and Australian trade for several years, as second officer of steamer *Lochinvar*, *Abbey Town* and *Palgrave*. Awaiting further information concerning your terms, believe me

Respectfully yours,

CHARLES B. BROWNE.

[REPLY TO MY SECOND LETTER.]

DEAR SIR—In reply to your letter received to-day, I wish to state to you how far I can meet your requirements. First, to satisfy you *that I am what I claim to be*, and qualified to give you all the information required, the number of my certificate is 014358, licensed on June 4, 1884, in London, England, by the Lords of Privy Council for trade. Second, certificates of discharge: No. 1, four mast steamship *Palgrave*; No. 2,

steamship Compta; No. 3, ship Huron, put back disabled; No. 4, transferred to Abbey Town, bound to South America and N. S. W., and Chili, South America. Served on this voyage from October 6, 1886 to October 7, 1887. This is the date of my last official discharge. The above certificates are now in my possession.

From charts used during my service in the ships named, I can give you all the information required; but cannot from ship's log book.... At the same time, I can and will gladly give you all the information you want from my charts.... Thanking you for enclosed, believe me,

Yours respectfully,

CHARLES B. BROWNE.

P. S.—I have also letters for service and ability, signed by Captains Dunn, Tullis, Thomas and Andrus, and Chief Officer Adams.

C. B. B.

[THIRD LETTER, DECEMBER 10, 1891.]

Alex. Gleason, Esq.:

DEAR SIR.... The courses and distances are all taken from charts used in steamships Lochinvar, Abbey Town, Compta and Palgrave. I would state that the distances are in all cases worked to geographical or nautical miles, sixty of which are equal to sixty-nine and one-fourth English miles. You are, no doubt, aware that there is 6070 feet to the nautical mile; this is often the cause of dispute with regard to the distance from port to port, many people not being aware of the difference between a nautical and statute mile. Distances, course and time are as follows:

First—*Cape Town to B. Ayres*; course, west by 6° south; *distance*, 4560 miles. *Best time* record known, steamship Lochinvar, Capt. Shelly, 13 days, 13 hours, 45 minutes.

Second—*Cape Town to Cape Horn*; course, west by 24° south; *distance*, 5700 miles. *Best time* on record, Abbey Town, Capt. Tullis, 13 days and 23 hours.

Yours respectfully,

CHARLES B. BROWNE.

It would be useless to weary the patient reader with all the details of voyages, distance and time that this navigator has given to Auckland, N. Z., Sydney, Australia, etc. But it is well worth while to now consider the above carefully.

First—If we take any globe map of the world and measure the distance from the Cape of Good Hope to Buenos Ayres, we will find it from 180 to 200 miles further than it is from Cape of Good Hope to Cape Horn. Bear this in mind. The navigator says that from Cape Good Hope to Cape Horn is 5700 miles, and he gives the course. This would throw Cape of Good Hope, South Africa, back to B and South America back to C, and make that distance, which theory shows to be the least by about 200 miles, the greatest by 1,140 miles.

Second—We will notice that at A A is represented a pin head on the Equator and on the coast lines of the two continents; this would hold the two coast lines in position on the Equator, which is an undisputed point. But if we take these continents and open their southern points to B. C. it will give the degrees of longitude that divergency required on the principle of the earth a plane, and Capt. Browne would be all right with his Mercator charts. But what has become of our New York friend's requirements in regard to the degrees of longitude? This we will see further on as we examine the ship's time record.

To the above fact I wrote Captain Browne, calling his attention to this discrepancy of distance, and after waiting until a reply was past due, I wrote a second letter, stating that perhaps there was some mistake in the figures, thinking they had got them transposed by some means in giving the numerous calculations. I stated to him that I had measured the distance on several globe maps with a fine steel line and they all told the same story. Further, I did not wish to publish a mistake

of this kind, if such it was. To this last, and the first, I received the following pert reply:

February 14, 1892.

Alex. Gleason, Esq.:

DEAR SIR—I have received both your letters. But having been away from home in my steamer, and when at home, very busy, I have been unable to attend to your request before this. In reply, would say that I don't pretend to know anything about working nautical questions with a tape-line. Furthermore, am very much surprised to learn from you that Cape Horn is 200 miles nearer Cape Town than Buenos Ayres. I don't take nearest points when working these questions, but degree of latitude and longitude. And if the following latitudes and longitudes are wrong, then the Admiralty Charts in my possession are wrong:

Lat. of Cape Town. $34^{\circ} 24' S.$ Long. of Cape Town. $18^{\circ} 32' E.$

Lat. of B. Ayres... $34^{\circ} 30' S.$ Long. of B. Ayres... $58^{\circ} 00' W.$

Lat. of Cape Horn. $55^{\circ} 59' S.$ Long. of Cape Horn. $67^{\circ} 12' W.$

If you can make Buenos Ayres 200 miles nearer Cape Town from these figures, there is no need for me to work any questions for you. Please take notice that the questions worked for you were done so by Mercator's Sailing Chart, which is our usual way of finding course and distance from point to point. Allow me to say that Cape Horn is nothing more than a rock, so whatever point you take don't amount to a *row of pins*.

Yours respectfully,

CHARLES B. BROWNE.

It was my interrogatory letter that has called forth these statements from Captain Browne, which to his mind did not amount to a "row of pins," and perhaps had he previously known my purpose in calling forth these responses, the value of what I would have gotten from that source would have been less than the estimate that he has put upon it. Nevertheless, Captain Browne is all right with his charts, his degrees, his latitudes and longitudes, also the time record's which we next notice.

Before going too far with the considerations of the relative or comparative time, mentioned by our challenger in the forepart of this article, under the indicator C, it will be necessary to notice the very best time ever made by the best crafts that float the northern seas, and perhaps the medium, also. We have entered no confederacy with steamship lines, but have procured some catalogues from which we have clipped two leaves for the benefit and interest of those who wish to be informed on these matters. First, we give one abstract of log, "Nord-deutscher," Lloyd's Steamship Line, Captain H. Hellmers, from Southampton to New York.

1889 DATE	LAT. N.	LONG. W.	DIST	WIND.	REMARKS.
Aug. 22					{ Left Southampton and passed Needles at 5.50 P. M.
" 23	49° 50'	9° 54'	330	WNW	mod. wind, cloudy, rough head sea.
" 24	49° 58'	21° 28'	446	W.-S.	mod. wind and sea, cl'dy, rough swell
" 25	49° 11'	33° 0'	452	E.N.E.	moderate wind and sea, over ast
" 26	47° 10'	43° 55'	453	SSW-NW	light wind and sea, overcast—foggy.
" 27	44° 9'	54° 4'	463	Northerly	moderate wind and sea, clear. [rain.
" 28	41° 48'	64° 7'	462	NW-SE.	light wind and sea, clear.
" 29	To	S'y Hk	454	Easterly.	moderate wind and sea, rainy.

Total distance, 3060 sea miles.

Arrived at Sandy Hook, August 29th, at 11.40 A. M.

Passage..... 6 days 17 hours 50 minutes.

Difference in time 4 " 52 "

Actual time 6 days 22 hours 42 minutes.

Average speed: 18.36 knots. Equal to 6 days 8 hours from Queenstown.

We give the above log, that the readers may see and be able to judge, in regard to variations of the vessel's course from point to point or port to port.

The following is a copy *verbatim* from the Hamburg-American Packet Company's catalogue, J. W. Klauck, agent, 70 Exchange street, Buffalo, N. Y.:

SPEED—These steamers have at once stepped to the front rank among ocean greyhounds, and must be counted among the fastest ships afloat. The best time accomplished was six days and twelve hours from New York to Southampton, being the fastest trip ever made between these two ports. This is equal to a trip of five days and twenty-one hours from New York to Queenstown, Southampton being about 300 miles east from Queenstown. The time by rail from Southampton to London is two hours. The landing arrangements at Southampton are considered superior to those of any port in England, the trains starting from the docks and the Hamburg-American Packet Company's special trains awaiting the passengers there. During the past three years steamers have maintained a regular fast weekly express service between New York, Southampton and Hamburg, taking passengers to *London within seven days, and to Hamburg within eight days*, while the actual average ocean passage is reduced to a little more than six days. This line, according to the annual report of the United States Superintendent of Foreign Mails, takes the first place over all others in the conveyance of the mails between New York and London. Their great regularity is indicated by the fact that almost all trips were made within a margin of a few hours. The arrival at New York, Southampton or Hamburg can therefore be easily forecast.

Passengers leaving New York on Thursday are landed in Southampton on the following Thursday, reaching London on the same day, thus bringing them from New York to London in less than a week (it has been done in six days and 16 hours, a feat not equalled by any other line.) This shows the wonderful convenience which these steamers offer to the traveling public.

The fastest runs were about twenty and three-fourths knots per hour, which is equal to $23\frac{3}{8}$ English miles, and exceed the speed of transcontinental trains.

SPECIMEN RUNS.—FROM NEW YORK.

Furst Bismarck, June 18, '91.....	6d. 12h. 58m.
Columbia, Oct. 9, '90.....	6d. 15h. 0m.
Normannia, Nov. 20, '90.....	6d. 17h. 03m.
Augusta-Victoria, Sept. 18, '90.....	6d. 22h. 32m.

FROM SOUTHAMPTON.

Furst Bismarck, May 9, '91.....	6d. 14h. 15m.
Columbia, June 27, '91.....	6d. 15h. 58m.
Normannia, May 23, '91.....	6d. 16h. 45m.
Augusta-Victoria, Oct. 2, '90.....	6d. 22h. 30m.

We will consider first, the build of these South-sea steamers as compared with those of our latest pattern. We are informed by the agent, Mr. J. W. Klauck, and others tell us that these South-sea steamers are all built by the same class of builders, or same building company, on the Clyde in Europe. The steamship Abbey Town, we were informed by Capt. Browne, was built by the East India government for this special southern trade, and it is this that gives the best time on record in the southern seas. Between New York and Hamburg, and Cape Town and Cape Horn, there is but about $1^{\circ} 30'$ difference, or say 100 miles, according to the globe measurement; that is, if we measure the difference from Hamburg to New York on a globe map with dividers, then place them on Cape Town and they will only lack about one degree and a half of reaching Cape Horn. Now, so far as danger or contingencies are concerned in making the voyages in a given equal time, the one preferred to the other, the South Sea has the advantage. This is shown on the navigator's charts, both in currents, rocks, shoals, islands, etc. This can be seen on the ordinary Mercator map of the world.

The question now resolves itself to this: On the globe principle, Cape Town to Cape Horn 3,600 miles; best time *ever made* $10\frac{3}{4}$ miles per hour, 335 hours=3,601 miles. If the above be true, the Cape Horn steamer was *six days* making

up that existing difference of one hundred miles in distance, under the most favorable circumstances, and this the *very best time ever known!*

We will now look at the matter from another standpoint. We will allow the northern navigators all they claim for distance and time. We now ask that the southern navigators and nautical inspectors be allowed their moderate claims for both time and distance, namely: Cape Town to Cape Horn, 5,700 miles. Time: 13 days 23 hours=335 hours at 17 miles per hour, 5,695 miles. Is it not as possible for the South Sea vessel to make seventeen or eighteen miles per hour in an extreme case, as it is for the northern to make twenty or twenty-one miles per hour? We leave this for you to answer.

Inasmuch as we believe that we have, not only in this article, but previous ones, given sufficient evidence to more than overbalance every reasonable objection to our position, we will only ask of him who is still skeptical, the same that has been asked of me. "Just stop and consider it, I say, for a short time and see if all these matters do not harmonize perfectly with philosophical and astronomical, and also with the experience of men who navigate the seas, especially those south of the Equator."

(k) As to the "child of the dark ages" we have a few words to say.

The Philosophy of Thales.

Thales, says our encyclopædias, a native of Miletus, in Ionia, or according to some, of Phœnicia, the earliest philosopher of Greece and founder of the Ionian school, was born about 640 B. C., died about 548; hence, he was about ninety-two years old at death. His philosophical doctrines were these:—He considered *water*, or rather fluidity, the element of *all* things. He taught that all natural phenomena are produced by

the condensation and rarefaction of water, and are resolvable into this element. Earth is condensed water, air is rarefied water, and fire rarefied air. If then, water is the origin of all things, it must not be considered as dead matter, but as a life-giving principle, which he also called the *soul of the world* or the *Divine principle*.

Thales taught that the universe was pervaded by demons or spirits (not far out of the way here), and assigned a soul to inanimate objects. That this creative, moving, forming power was necessarily diffused and at work throughout the universe as an essential property of the original principle. Says the *Encyclopædia Americana*: "The story that he foretold an eclipse of the sun, although he may only have indicated the year of its occurrence, implies a more correct knowledge of the Solar system that he and his disciples appear, from the statements of Plutarch and Diogenes and Laertius, to have possessed; that is, supposing his prediction to have been founded on his own observations and calculation."

If we return to the last part of chapter seventeen and compare the record of Thales with that of Pythagoras, we shall find a very striking resemblance in the character of the two, so far as their ideas of Divinity were concerned, at least, we are compelled to believe that they were from the region, not only of the "dark ages," but mythological demons, inspired by Beelzebub, their chief and founder of the whole system of paganism, to which so many tenaciously cling.

CHAPTER XX.

The Closing Consideration. A Peculiar People.

THERE is a people scattered abroad throughout the earth, with whom I have had an acquaintance for over thirty years, who claim to be the antitypical Israel, and the depositaries of God's laws. They believe the promises are due to them on this wise: "Know ye, therefore, that they which are of faith, the same are the children of Abraham." (Gal. 3:7.) "Now to Abraham and his seed were the promises made. He saith not, and unto seeds, as of many; but as of one, and to thy seed, which is Christ." (Sixteenth verse.) "And if ye be Christ's, then are ye Abraham's seed and heirs according to the promise." (Gal. 3:29.) This people also believe that they are giving the last notes of warning prior to the appearance of Him of whom it was said: "Whom the heavens must receive until the restitution of all things, which God hath spoken by the mouth of all His holy prophets since the world began." (Acts 3:21, Matt. 24:14, Dan. 2:44, 7:27.) The latter quotation covers complete their anticipated hopes and joys of this present life and that which is to come. "And the kingdom and dominion, and the greatness of the kingdom under the whole heaven, shall be given to the people of the saints of the Most High, whose kingdom is an everlasting kingdom, and all dominions shall serve and obey Him." [Christ.]

Further, this people claim to be giving that everlasting Gospel, styled the "Third Angel's Message" of Rev. 14:6-12. Some prominent ones among this people have taught that this

subject of the shape of the earth was no part of the "Third Angel's Message," and therefore no part of the truth for them to receive; consequently, they are to have nothing to do with it. It has been an adage with some truth-loving people, that an *unpopular truth* was more acceptable than an unpopular error. We do find some, sorry to say, that cling to the popular error, at the sacrifice of the unpopular truth. While some are declaring that they have nothing to do with the matter, yet we still hear them preaching the Earth a Globe, and are teaching it from their high schools and colleges. Now, this has long been their motto: "To the law and to the testimony: If they speak not according to this Word, it is because there is no light in them." Isa. 8:20.

Having briefly noticed the future hope and reward of this people, we wish their forbearance while we notice the characteristics they are to bear.

We would not by these words assume the prerogative of a leader or teacher of this people. God's Word will *teach* and *lead* all that will be led or taught by it. But allow me to call attention to that which is your delight and that which so many of you know so well. We ask what was to be the character of the church when presented to the Master? Ephesians (5:27) will tell us plainly, "That He might present it to Himself a glorious church, not having spot, nor wrinkle, or any such thing; but that it should be holy and without blemish." Is the remnant to teach the truth only? We will let Zept. (3:13) answer: "The remnant of Israel shall not do iniquity, nor speak lies; neither shall a deceitful tongue be found in their mouth." Allow a few more citations. What does the angel say to St. John? (Rev. 14: last clause of the 4th verse.) "These were purchased from among men, to be the first fruits unto God and unto the Lamb. (5) And in their mouth was

found *no lie*; they are without blemish." (N.V.) The Revelator says: "Blessed are they that do His commandments, that they may have right to the tree of life, and may enter in through the gates into the city." He also says, that without are "every one that *loveth* and *maketh* a lie."

"Lord, who shall abide in thy tabernacle? who shall dwell in thy holy hill? He that walketh uprightly and worketh righteousness, and speaketh the *truth in his heart*.'" (Ps. 15: 1, 2.) Actions, many times, speak louder than words; then, this being true, may not inspiration refer to the same? Yes, or "taketh up a reproach against his neighbor." (Last clause 3d verse.) I understand by this: He who carries reports, whether he can sustain them or not by the Word, does it at a peril.

The Lord says by the Prophet Zechariah: "These are the things ye shall do; speak ye *every man* the truth to his neighbor." (Zech. 8:18.) Then, can we teach our neighbors or family that which is not truth, and be clear in the sight of heaven; and further say "that the Bible was not given to teach astronomy," and that "it makes no difference to me whether this earth is flat or round?" True, it may not make any difference to us in regard to its shape, but it will make a difference whether we speak, think, act and teach the truth or a *lie*. Christ says, "I am the way, *the truth*, and *the life*; no man cometh to the Father but by me." If we earnestly desire, seek and strive for it, the spirit of truth will guide us unto *all* truth. (See John 16:13.) Then, in view of even the very few declarations above given, do not say that the message and mission that we have to perform is separated from any truth necessary for us to believe and maintain against the author, and the refuse of lies which are to be swept from the earth.

In order to harmonize the Scriptures to suit modern science,

falsely so-called, the world has gone contrary to all true principles of interpretation; thus have they made the literal rendering of no effect. We give an extract taken from an editorial in the *Signs of the Times* for May 19, 1890:

1. "The Bible does not simply *contain* the truth, but it is the truth and the whole truth. And whatever disagrees with the Bible, *whether it be in the realms of morals or science*, must be false.

2. "When a position taken in regard to any text is consistent with the entire Bible, that of itself is evidence that the position is correct.

3. "The Bible must interpret itself; *it cannot need the addition of matter outside of itself*.

"Terms used in one place in the Bible with a certain signification, must have *the same meaning* attached to them in every other place where they occur, provided the same subject is under consideration." We say—Amen !

On the above principles let us examine a few texts of the Word, and if we cannot maintain the above principles, then let us forever *cease to contend or maintain the literality* of the Scriptures and meekly take our position with that class of investigators spoken of in 2 Tim. 3:7: "Ever learning, and never able to come to the knowledge of the truth."

(a)—(Joshua 10: 12, 13.) When Joshua spoke to the Lord and commanded the sun and moon to stand still did he mean the earth ?

(b)—Thirteenth verse: "And the sun stood still and the moon stayed. . . ." Is it true ? Or did the earth stand still ?

"Add thou not to His words lest He reprove thee and thou be found a liar." Prov. 30: 6.

(c) Psalms 19:1-6. In speaking of the glory of the *heavens* the Psalmist says: "In *them* hath He set a tabernacle

for the sun; which is as a bridegroom coming out of his chamber, and rejoiceth as a strong man to run a race. His GOING FORTH is from the end of heaven, and his CIRCUIT unto the ends of it. . . .” Could our globe friends find such a testimony as this in the Scriptures for their side of the question, we would have to acknowledge that we knew of no *rules* of interpretation for the Word of God. Has inspiration used a medium through which to communicate to mortals, that would use other words than His, and words calculated to deceive? I cannot believe it! This would-be science tells and teaches that it is the earth, and not the sun that moves. Then why not say so in that Word that describes the glory of the heavens? Is it in the heavens that He set a *tabernacle* for the *earth*? Is it the *earth*, whose going forth is from the end of heaven, and his circuit unto the ends of it? (d) But, tenacious for your early instructions, and not content with other positive evidence to the contrary, you refer me to Job 26:7, which says: “He stretcheth out the north over the empty place, and *hangeth* the earth upon nothing.” Dr. A. Clark says that the Chaldean version renders it thus: “He layeth it upon the waters, *nothing* sustaining it.” This harmonizes with Ps. 24:2: “For He hath *founded* it upon the seas, and established it upon the floods.” (e) Ps. 78:69, says: “And He built His sanctuaries like high places, like the earth which He has established (margin, *founded*) forever.” (f) Does God here compare His tabernacle or sanctuary (dwelling places; synonymous terms), to something that was flying through space faster than a cannon ball, and turning around at the same time at the rate of more than a thousand miles per hour? Or should we understand Him to mean the sun, when He said *earth*? (g) “But He hangeth it upon nothing,” is what you claim. Yes, and so do I! He done just as He said He did “Founded upon the

seas, Nothing sustaining it;" (nothing is a *nonentity*; then, no human thing sustained it.) You next demand the foundation of the seas. Well, I will give you just what God *says* about that, and I do not think that I am authorized to go beyond, for, "The secret things belong unto the Lord our God, but those things which are revealed [in His Word], belong unto us, and to our children forever, that we may do all the words of this law." (Deut. 29:29.) Now, the Prophet Jeremiah will be responsible for the following declarations, for he declares that it is a "Thus saith the Lord:"

"Thus saith the Lord, which giveth the sun for a light by day and the ordinances of the moon and of the stars for a light by night, which divideth the sea when the waves thereof roar. The Lord of hosts is His name. If those ordinances depart from before me, saith the Lord, then the seed of Israel also shall cease from being a nation before me forever. Thus saith the Lord; if heaven above can be measured, and the foundations of the earth searched out beneath, I will also cast off all the seed of Israel for all that they have done, saith the Lord." Jer. 31:35-37.

Yes, truly we may infer from the declarations of God Himself, and His Infinite works and wisdom, that if *finite* man, the work of His hands, formed of the dust, can search out Infinity, then Infinity has no more use for Him, and he is independent of Him who formed him.

We can only say in conclusion, and this with the utmost confidence and with God's Word to sustain us, that—first, there is foundation beneath; second, the heaven of heavens are above. Also, the everlasting bounds of ice that cover the deep are below the heavens. "The waters are hid as with a stone, and the face of the deep is frozen." (Job 38:30.) "Hast thou perceived the breadth of the earth; declare if thou

knowest it all." (Job 38: 18.) "He hath compassed the waters with bounds until the day and night come to an end." (Job 26: 10.) The R. V. has it thus: "He hath described a boundary upon the face of the waters, unto the confines of light and darkness." We cannot refrain from a few remarks on these harmonious quotations; there is no ambiguity here; there is no evading the conclusions if honestly considered by those who revere the Word of God. First—it is true that day and night *do not* come to an end at the north, for it is well known to those living in Spitzbergen (as shown heretofore in this book) that there is three and a half months day. Therefore, when day begins, night ends, and *vice versa*. Then no spot on this earth north of the Equator does night and day end. But the infallible Word of God says that those "confines or bounds are upon the face of the waters."

Now if the "bounds" are on the face of the waters, certainly they are the one side or the other of the Equator. "That path (or bounds) no bird of prey knoweth, neither hath the falcon's eye seen it; the proud beasts have not trodden it, nor hath the fierce lion passed thereby." Job. 28: 7, 8. (R. V.)

Sir James Ross advanced to 78° 10' south and there traversed a wall of ice (estimated to be a thousand feet thick and from 150 to 200 feet high) for 450 miles without a crack or crevice sufficient for a row-boat; gave up the search for any passage and returned. No human being, before nor since, has passed that wall God in His wisdom built, and He has said, "Hitherto shalt thou come, but no further; and here shall thy proud waves be stayed." (Job. 38: 11.) In conclusion, suffer a few words, though in substance it has been repeated in this book; they have reference to the northern bounds as compared to the south.

"The North Polar Basin is circumscribed by the line of

eighty degrees. Within the latter is the open Polar Sea, which is nearly 1000 miles in diameter. Sir Edward Parry with *open boats* advanced in it toward the north to the latitude of $82^{\circ} 45'$, or to the proximity of 435 miles from the center, the nearest point ever reached by man. [This was between 1827 and 1829. Since that time, on May 13, 1883, Lieut. James B. Lockwood and Sergt. Brainard pushed north to $83^{\circ} 24'$. See following article by Mr. Lovell.] The current flowing south was so rapid that it completely neutralized the northward progress effected by rowing, and the unsuccessful attempt was abandoned. Dr. Hayes reached $81^{\circ} 35'$ or within 505 miles. Mr. Morton, of Kane's expedition attained $81^{\circ} 22'$ or within 518 geographical miles.... Both Hayes and Morton, as far as they could observe, found *no ice*, but on the contrary, a warm open sea. *Birds were flying north*. Snow had melted from the mountains, leaving them clad only with a thin covering of ice.... The established line of greatest cold on the American continent is 700 miles south of the North Pole, and on the Asiatic 625 miles south." Prof. F. Miller's great lecture, "Harmony of the Bible and Natural Philosophy," page 45.

We have seen by the above where the north boundary or limit of cold existed, and passed that extreme into that place inhabited by the birds of a genial climate, to an open sea, and there we leave those considerations of the two extremes of North and South.

There remains another passage that has been misconstrued to prove the earth a globe, and has went the rounds of the papers, but has no bearing whatever. In order to show this we will take its connections. We will first look at Job 38: 12, "Hast Thou commanded the *morning* since thy days, and caused the *day-spring* to know his place. (13th.) That it might take hold of the ends of the earth, that the wicked

might be shaken out of it? (14th.) It is changed as clay to the seal; and they stand as a garment." In the new version, the fourteenth verse reads, "It is changed as clay under the seal, and *all things* stand as a garment." Dowa version reads, twelfth verse, "Didst thou since thy birth command the morning, and show the dawning of the day its place. (14th!) The seal shall be restored as clay, and shall stand as a garment. (15th.) From the wicked their *light* shall be taken away."..... How these expressions can be made to apply to anything but the *light* and its source, is beyond my comprehension.

I will now close my remarks by quoting a few short paragraphs from a writer well known to all of that people of which I have referred:

"The truth and the glory of God are inseparable; it is impossible for us, with the Bible within our reach, to honor God by erroneous opinions. Many claim that it matters not what one believes, if his life is only right. But the life is moulded by the faith. If light and truth are within our reach, and we neglect to improve the privilege of hearing and seeing it, we virtually reject it; we choose darkness rather than light. 'There is a way that seemeth right unto a man, but the end thereof are the ways of death.' (Prov. 16:25.) Ignorance is no excuse for error or sin, when there is every opportunity to know the will of God." Great Controversy, p. 597.

In Revelation 21:22 (referring to the New Jerusalem after it had descended to the New Earth), the Revelator says, "And I saw no temple therein, for the Lord God Almighty and the Lamb are the temple of it." The 23d verse, latter clause says, "For the glory of God did lighten it, and the Lamb is the light thereof." In 22:3d verse we read, "And there shall be no more curse, but the throne of God and the Lamb shall be in it,

and His servants shall serve Him (4) and they shall see His face, and His name shall be in their foreheads." In "Great Controversy," edition of 1888, pages 676-678, are the following remarks upon the above references:

"The people of God are privileged to hold open communion with the Father and the Son. Now we 'see through a glass darkly.' (1 Cor. 13: 12.) We behold the image of God reflected as in a mirror, in the works of Nature and in His dealings with men; but then we shall see Him face to face, without a dimming veil between. With undimmed vision they gaze upon the glory of creation, *suns*, and *stars* and *systems*, all in their appointed order circling the throne of the Diety."

Now we ask, if anyone can so construe the above quotations and language spoken, as to place the Throne of God and His Son anywhere else than on this earth, when the "restitution of all things" shall have taken place? Advocate it who will, I cannot.

In preparing this work for the public, the author has aimed for the diffusion of that class of knowledge and information, which in its nature should contribute to liberty of the God-given conscience. If this effort shall contribute to enlarge our views and destroy prejudice, I feel assured that I shall receive the most gratifying reward for the few laborious days which have been devoted to the task of gathering these, disconnected though they may be, yet, vital and important facts.

ALEX. GLEASON,

JANUARY, 1893.

1201 Niagara street,

BUFFALO, N.Y., U. S. A.

SOME POINTS FROM POPULAR SOURCES,

Selected and Furnished for this Book, Together with Additional Remarks, by R. E. L. J. Lovell, Vadis, W. Va.

THE polar night in the highest latitudes begins in October and lasts till nearly February. Then the sun appears each day, at first for a few moments only, and then longer and longer, till by May it does not set at all. For three months there is perpetual day—May, June and July. By the end of June the ice of the Arctic seas is commonly divided and scattered. Then there is excessive moisture everywhere. July is a bright month, and in sheltered spots the heat may become excessive.

“Lieutenant James B. Lockwood and Sergeant Brainard pushed north to latitude $83^{\circ} 24'$, to an elevation 2,000 feet above the sea. The time was May 13, 1883. Curious as it may seem, there was no absence of animal life. Hares, lemmings, ptarmigans, snow birds, snowy owls, polar bears, musk-oxen, and even vegetation were found. The potato is cultivated in favored spots in South Greenland, also turnips, cabbage, salad and spinach. Barley grows, flowers bloom, berries mature, grasses grow on the slopes and along the fiords. Beech, birch and willow are found. (Greenland is enclosed by two Arctic currents). Man has never yet gone northward of a spot where vegetation of some kind does not exist.

“What a contrast is presented in the Antarctic regions! No plant of any kind, not even a lichen or moss, has been found within $64^{\circ} 12'$ south latitude, and while even in Spitzbergen

vegetation ascends the mountain slopes to a height of 3,000 feet, the snow line descends to the water's edge in every land within the Antarctic Circle. And as to quadrupeds, no four-footed animal has ever been found beyond 60° of southern latitude. Antarctic navigators, with one exception, have failed to penetrate the ice barriers of the southern seas further than to the comparatively low latitude of $78^{\circ} 10'$. The short, warm summer of the North which cracks the ice floes, starts rivulets upon the glaciers, encourages a burst of hearty flowers and grasses, invites all animal life to an annual visit, which is unknown around the South. Only in one spot, to the east of Newfoundland, has a northern iceberg been known to descend as far south as 39° . In the Southern ocean they have been found off the Cape of Good Hope in latitude 35° , opposite the mouth of the Rio de la Platte, and within 300 miles of Tasmania.

"In 1775 Captain Cook discovered South Georgia, in latitude 55° —not so far as Labrador or Iceland, north. 'We saw not a river or stream,' he says. 'All the coves of the bay were the heads of glaciers of great height, from which pieces were continually dropping and floating out to sea. Wild rocks raised their lofty summits till lost in the clouds, and the valleys lay covered with perpetual snow. Not a tree was seen, nor even a shrub large enough for a tooth-pick. The only vegetation visible was a moss and a tufty grass which sprang from the rocks.'

"Before this description could apply to northern lands, we must go to Nova Zembla, to Spitzbergen, or as far as man has gone up the west coast of Greenland. At Kerguelen Land, 50° south, Cook found the ground covered with snow in the middle of the southern summer. In Europe, the most southern glacier which comes down to the sea, is on the coast of Nor-

way, 67° north latitude. In the Gulf of Penas, on the west side of Patagonia, in latitude $46^{\circ} 50'$, the same as that of Geneva, north, is a glacier fifteen miles long and seven wide, descending to the coast.

"In 1839, Dumont d'Urville sailed ninety miles along a lofty coast and named it Adelia Land, latitude $61^{\circ} 30'$ ", says 'People's Cyclopædia,' page 111. It is a dead and desolate country, without a sign of vegetation. In 1840 Wilkes struck another part of this ice-bound coast, since called Wilkes' Land, which he traced for 1500 miles.

"Captain Ross, on January 9th (equivalent to our July), at Victoria Land, 72° south, could find no harbor. Every indentation in the coast was filled with ice and drifted snow, to the depth of hundreds of feet. There was nothing to anchor to and no spot for human feet. At Upernavik, in Greenland, the same distance north, is a fisherman's village, and a summer of two to three months. Ross tried very hard to penetrate further south, but he was opposed by an ice barrier, without a break for 450 miles, and with precipitous edges over 180 feet in height. *Antarctic winter scenes have never been sketched, for no man has dared to stay in their midst.* Nature seems to say, in blasts of her southern seas, and crash of their icebergs, 'Thus far shalt thou come, and no further.'"—Heavens, Earth and Ocean, by James P. Boyd, A. M., 1887, pp. 665 to 830. Also Cook's Voyages, pp. 248-280.

"The earth is three million miles nearer the sun in winter than in summer."—Quackenbos' Natural Philosophy. *Observe* that this is said to be the case at the middle of the southern summer (our winter), and that the South Pole (?) is then inclined *toward* the sun!

"If the earth were a perfect sphere, without elevations and depressions, the depth of the entire volume of water

would be about 10,000 feet."—Question Book on Physical Geography, by Asa H. Craig, p. 262.

"Mt. Ararat, in Asia, is 17,210 feet high; Mt. Everest, 29,100; Mt. Aconcagua, S. A., 23,100 feet."—Mitchell's Geography, third book, 1872.

(Now, there was a great flood one time.) "And all the high hills that were under the whole heavens were covered."—Gen. 7: 19. The earth being a plane, "stretched out upon the seas, (Bible) the fountains of the great deep were broken up," and as the waters rushed in from the south expanse, they covered the earth like the ship borne down by the waves! Nothing else accounts for the vast animal deposits about the north. The incoming waters conveyed them there, and as the waters "returned to the place from whence they came," very naturally left these deposits.

"These eruptions and retreats of the sea, have neither been slow nor gradual; most of the catastrophes which have occasioned them have been sudden. Traces of the Antediluvian deluge are very conspicuous. In the northern regions it has left the carcasses of some large quadrupeds, which the ice has preserved, with their skin, hair and flesh. [Doubtless these were preserved in evidence, to witness to the truth of God's Word.—Gleason.] The elephant found near the mouth of the Lena, by Mr. Adams, in 1799, was in such high preservation that its flesh was eaten by dogs."—Buffon's Natural History, p. 35.

"The greatest wonder of this bleak coast is its wealth of mammoth tusks. Along the shores of the Obi, Yenisee and Lena, and the shores of the Polar Ocean are found the remains of a species of elephant, imbedded in the frozen soil or in the ice. In one of the Lachow Islands was found a deposit of mammoth bones of remarkable richness. In 1821, 20,000

pounds of fossil ivory were taken out, and the supply seemed inexhaustible. Not only fossil horses, buffaloes, oxen and sheep have been found, but wood imbedded in the soil. The sandstone of the high hills embraces woody beams and trunks."—*Lands of the Midnight Sun*, pp. 809–811. James P. Boyd.

"Here we first got a cloudy, vague idea of what had passed in the big world during our absence. The fiction of its rotation had not much disturbed the little outpost of civilization."—Dr. Kane, 1855, at Upernavik.

"The sun, moon and stars were regarded as subsidiary to the earth. There seems to be traces of the idea that the world was a disc."—*Smith's Bible Dictionary*, p. 155.

Astronomers are wont to be very precise in their calculations, and boasted of their discovery of Neptune by prediction and calculation. It has been so taught in the schools. But, see Mitchell's *Astronomy*, p. 275. He says: "The real planet was found five billion miles distant from where the computed one was supposed to be."

"M. A. W.—'Please tell me two things. First: Who discovered that the earth was round? Second: How can we prove by observation that the earth revolves upon its axis?' *The World* does not know, and never heard tell of anyone who could answer your questions."—*New York World*, Jan. 22, 1890.

"M. W.—The exact diameter of the earth taken through the poles, is given out by astronomers at 7898.8809 miles, and at the Equator at 7924.911. This is simply scientific swindling, nothing more nor less. It is a matter of theory only, and the bunco-steerers in science, and particularly in astronomy, have things quite their own way."—*New York World*, April 15, '91.

"L. B.—No one ever yet ventured a plausible theory to account for the gulf stream. Each theory put forward neglects

some vital fact. The rotation of the earth, the specific gravity of the differently warmed waters, and surface winds, have each in turn been proposed and abandoned. Capt. Nares' report in 1874 (*Challenger*), shows that the three cannot even be combined. The least expansion of the Atlantic Ocean from heat is under the Equator, at 7° S., and there is more warm water at 23° N. than at the Equator. At 38° N. the Atlantic is three and one-half feet higher than at 23° N., two and one-half feet higher than at the Equator, and if gravity compels water to run down hill then the gulf stream should flow the other way, while the 'Equatorial bulge' is in the temperate zone."—*New York World*, 1890.

"They may be forced up northward by the cooler waters from the frozen southern seas spreading northward under the surface of the ocean, the earth being a plane. But 'gravity' knocks out the 'popular' theory."—"Mostly Fools."—Carlyle.

"The wisdom of this world is foolishness with God." (1 Cor. 3:19.) "Let God be found true, but every man a liar, that God may be justified in His ways." (Rom. 3:4.) "For, saith the Lord, as the heavens are higher than the earth, so are My ways higher than your ways, and My thoughts higher than your thoughts." Isaiah.

"See! and confess, one comfort still must rise;
'Tis this—though man's a fool, God is wise."—Pope.

"The Bible is a book worth all other books which were ever printed."—Patrick Henry.

"The very first verse of Scripture is perhaps the most weighty ever uttered or penned; which, setting forth the five grand subjects: God, Creation, Heaven, Earth, Beginning, is the germ of all philosophy and science, known and unknown, visible and invisible."—Rev. W. Brookman, Toronto.

"Science in all its branches must ever be found to possess

its origin in the Word of Truth. Such a principle may be opposed, and clouded over by the temporary force of human imaginings; but sooner or later the Bible will be confessed to have been 'written for our instruction, and that whatsoever things were written aforetime were written for our learning.'"
—Greershom.

"Many things that we now call discoveries are, strictly speaking, recoveries and restorations of the past. There is no truth which is new; falsehood alone permits of invention, and is therefore evanescent and temporary, while Truth is eternal—"the same yesterday, to-day, and forever."—Parallax.

"I would rather have one little promise in the corner of the Bible, than all the statements and theories of all the philosophers that ever lived. The history of philosophers has, in brief, been the history of fools. Each contradicts the other, and not a moon changes but finds a change in their doctrines."
—Rev. C. H. Spurgeon.

It has ever been thus. Like the sands on the shore of the sea, they are continually shifting; has been the philosophy, learning and religion of the Mystics, the Pagans, the Greeks, and the Romans. What was once proclaimed from the high places, and believed on in the world so confidently, that he would be sent to the dungeon who would dare dispute it, is now so strongly condemned by the world that he would be put out of the synagogues of men who would dare believe it. But through all the rise and fall of the ages, and whilst system after system of the philosophy of the sages has had its day, and tumbled into the abyss of its predecessors, the Bible, effulgent with sparks of Divinity, has presented one unsullied and unbroken chain of harmony, which shall, after the fullness of time of iniquity, bind Satan and his kingdom, and justify God as supreme.

And it is not to be wondered at that the school of modern philosophers has been able to add but little to, while they have borrowed much from, the records of the Ancients, who for fifty-five centuries held to the even tenor of the Scriptures. Let us see. The signs of the zodiac were known to them as far back as the Chaldeans. They divided the heavens into constellations; they discovered the planetary revolutions and periods; they discovered the great Lunar cycle of a little more than eighteen years, on the completion of which Solar eclipses occur; they as accurately calculated Lunar eclipses, though they believed neither the theory of the sphericity of the earth, nor the theory of a stationary sun and a revolving earth. They were aware of the practical immobility of the Pole Star; they knew that the heavens completed a diurnal revolution in four minutes less time than the sun, and hence that the sun lost a complete revolution on the stars in a year; they knew the moon lost a revolution on the stars in twenty-seven and one-half days, and on the sun in twenty-six and one-half days, though these facts did not make them conclude that the sun and moon were going backwards. They discovered so-called "precision of equinoxes," and knew that the sun was longer, by eight days, north of the Equator than he was south of it. Now, what do modern astronomers know, more than these things? With the possible exception of Uranus and Neptune, they have given us little else than planetary speculation on the hypothesis of Copernicus. The fact is, that they being called "astronomers," and having been caught in the popular drift of science, and being entangled thereby, go on, of necessity, bringing forth one absurdity to support another, till their system of astronomy is not held together even by a fabric of the most base suppositions. They take up the terms "attraction" and "gravitation," and spin our supposed "ball" through space "with the rapidity of

lightning," pushing, hauling and dragging with it the moon, the atmosphere and oceans; while clouds and currents of water are running undisturbed, at the same time, toward every point of the compass, without splitting the ball, as the natural result of such rotation would be, into myriads of atoms, or sending broadcast through the universe a multitude of fiery meteors; but holding all "unperceived," by "gravitation" and "attraction," from a source a hundred millions of miles away, when no gaseous or luminous bodies have ever been found to possess attractive power!

We can readily understand why we may swing a pail of water in a circle about our head, but how the pail can perform the revolution without the arm, or the water go around without the pail, is a matter that none but modern astronomers could dare declare, much less believe!

Now, nothing seems plainer to me than that the facts are opposed to the theories, hence the theories must be wrong, and, if wrong, Zeteticism and the Bible is most likely right; if right, school children should no longer be compelled to believe that which astronomers have long known they cannot prove—a supposition to be a fact. Indeed, we think that we have reasons to believe that in the coming generations, the iron-bound shackles of prejudice and ignorance will be thrown off, and that the living objections now in the way of God's truth, will be removed by Father Time; that the throbbing that has sent the spirit of inquiry into the channels of intelligence will lead on, till once again shall be proclaimed that "Truth crushed to earth will rise again."

R. E. L. J. LOVELL.

VADIS, W. Va., May, 1891.

How the Continents Attract Seas.

“The effect of gravitation in heaping up the sea waters upon the shores of continents is one of the most interesting, as well as the most curious and least considered facts in connection with old ocean’s history. Thus the continents are all situated at tops of great hills or mountains of water, and to cross the Atlantic or any other ocean the ship has first to go down the sloping sheet, cross the valley and then climb the mountain of water on the other side before it safely reaches a harbor.

“In this connection the interesting calculation has been made that in mid-ocean on the Atlantic the depression is about three-fourths of a mile below the level of the water at coast line, while a ship in traveling from San Francisco to Yokohama, Japan, must cross a valley at least a mile in depth.”—*St. Louis Republic*.

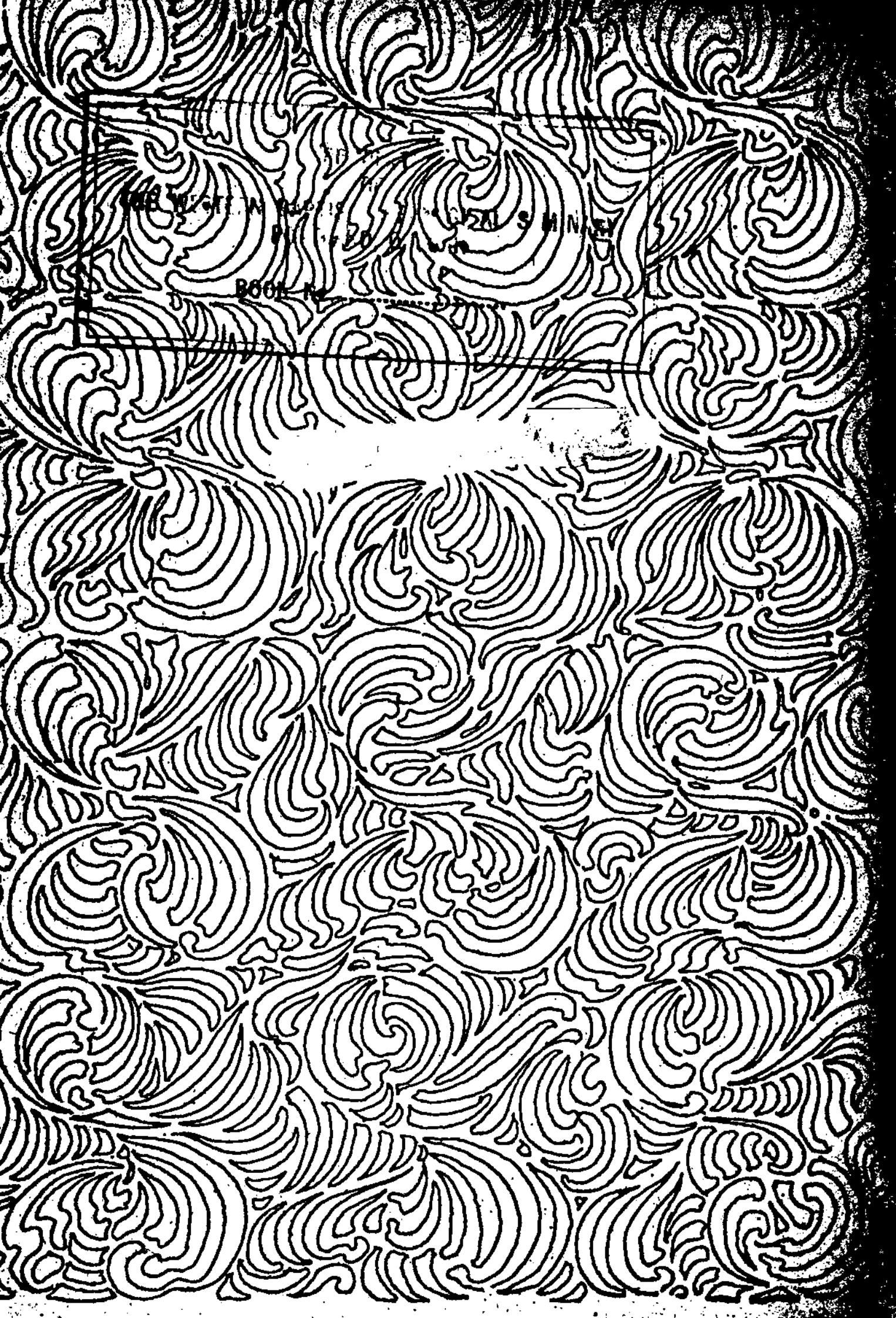
How does the above harmonize with the globe theory?
—Author.

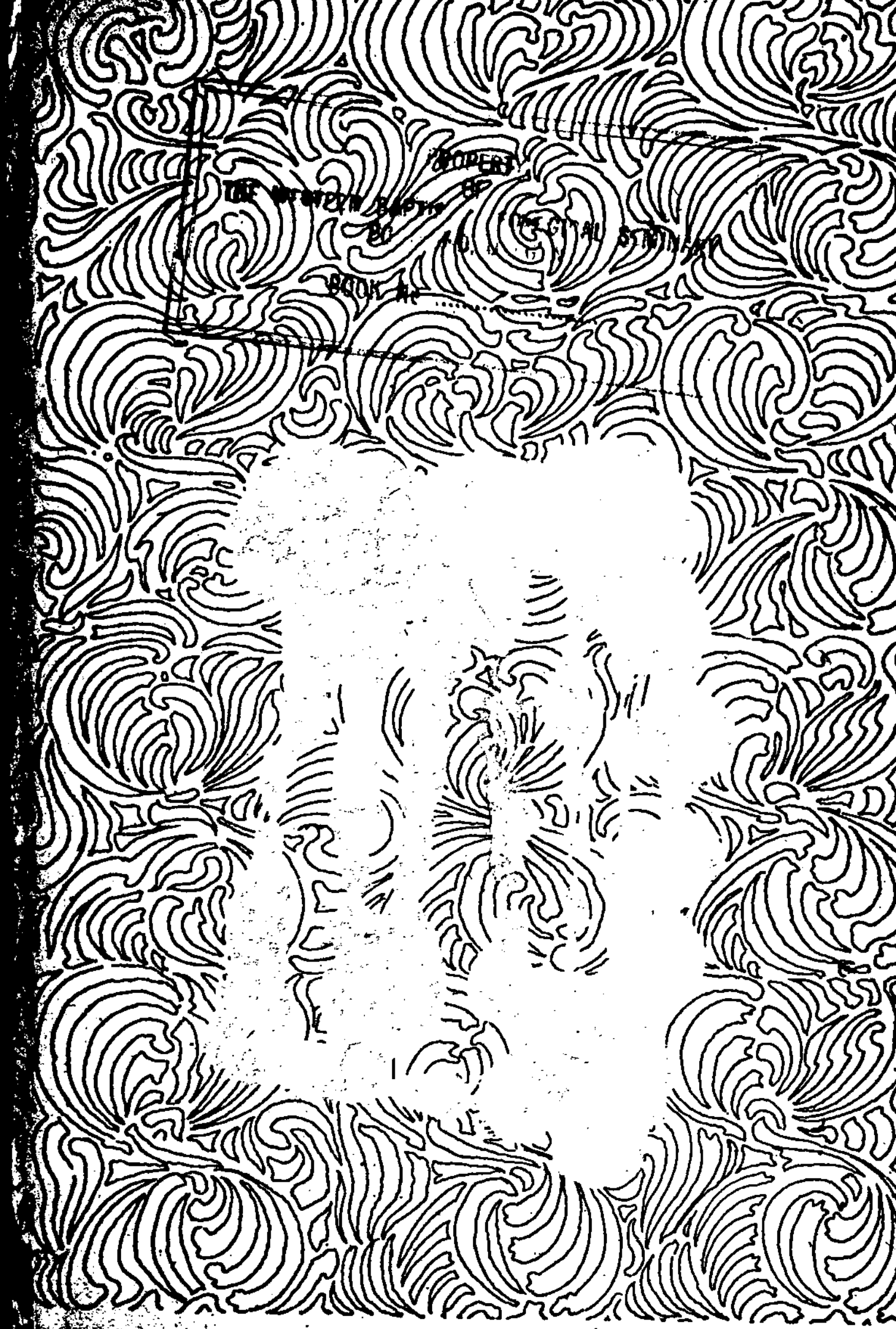
	Degrees North of the Equator.	Miles.		Degrees South of the Equator.	Miles.	
North Pole →	90°	0				
	85°	3 $\frac{1}{3}$		5°	63 $\frac{1}{3}$	
	80°	6 $\frac{2}{3}$		10°	66 $\frac{2}{3}$	
	75°	10		15°	70	
	70°	13 $\frac{1}{3}$		20°	73 $\frac{1}{3}$	
	65°	16 $\frac{2}{3}$		25°	76 $\frac{2}{3}$	
	60°	20		30°	80	
	55°	23 $\frac{1}{3}$		35°	83 $\frac{1}{3}$	Cape Town 82.
	50°	26 $\frac{2}{3}$		40°	86 $\frac{2}{3}$	
North Lat.	45°	30		45°	90	South Lat.
	40°	33 $\frac{1}{3}$		50°	93 $\frac{1}{3}$	
	35°	36 $\frac{2}{3}$		55°	96 $\frac{2}{3}$	
Cape Town 34° 22'	30°	40		60°	100	
	25°	43 $\frac{1}{3}$		65°	103 $\frac{1}{3}$	
	20°	46 $\frac{2}{3}$		70°	105 $\frac{2}{3}$	
	15°	50		75°	110	
	10°	53 $\frac{1}{3}$		80°	113 $\frac{1}{3}$	
	5°	56 $\frac{2}{3}$		85°	116 $\frac{2}{3}$	
Latitude of the Equator.	0°	60		90°	120	South Circumference.

Fig. 43.

Diagram No. 43 will be found convenient for getting the longitude in miles of any meridian north or south of the Equator. As the earth has been repeatedly proven to be a plane, the lines of longitude are therefore straight, and they continue to diverge from each other at the same ratio as we go south, south of the Equator, as they do from the North Center or Pole to the Equator. It will be seen, that for every *five degrees of latitude*, there is an existing divergency of three and one-third miles.

Example: Commence at the top of the left hand column 90° and read to the Equator 0°—60 miles. Next, for southern distances, take the two right hand columns and read downward.





THE MIDDLE EAST

PROPERTY

THE GREAT BRITAIN

BOOK

